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USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK

Volume 128
T-38 Aircraft In The AF32A-18 Noise Suppressor, Near And Far-Field Noise

JULY 1979

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AEROSPACE MEDICAL RESEARCH LABORATORY
AEROSPACE MEDICAL DIVISION
AIR FORCE SYSTEMS COMMAND
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433

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FOR THE COMMANDER

HENNING E. VON GIERKE
Director
Biodynamics and Bioengineering Division
Aerospace Medical Research Laboratory

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The AF32A-18 noise suppressor is made by General Acoustics Corporation for acoustical suppression of the T-38 aircraft. This report provides measured and extrapolated data defining the bioacoustic environments produced by this aircraft operating in this suppressor for five engine power configurations. Near-field data are reported for four locations in a wide variety of physical and psychoacoustic measures: overall and

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band sound pressure levels, C-weighted and A-weighted sound levels, preferred speech interference level, perceived noise level, and limiting times for total daily exposure of personnel with and without standard Air Force ear protectors. Far-field data measured at 19 locations are normalized to standard meteorological conditions and extrapolated from 75-8000 meters to derive sets of equal-value contours for these same seven acoustic measures as functions of angle and distance from the source. Refer to Volume 1 of this handbook, "USAF Bioenvironmental Noise Data Handbook, Vol 1: Organization, Content and Application", AMRL-TR-75-50(1) 1975, for discussion of the objective and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc.

PREFACE

This report was prepared by the Biodynamic Environment Branch, Aerospace Medical Research Laboratory, under Project/Task 72310?, Technology to Define and Assess Environmental Quality of Noise From Air Force Operations.

The author gratefully acknowledges Mr. John Cole and Mr. Robert Powell for their assistance in preparing this report, Mr. Jerry Speakman and Capt Richard Gorman for their assistance in acquiring the raw data, Mr. Keith Kettler, Mr. Henry Mohlman and Mr. Fred Lampley of the University of Dayton for assistance in the mechanics of data processing, and Mrs. Peggy Massie for assistance in typing this report.

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INTRODUCTION

The T-38A is a twin-engine, double-seat, supersonic trainer powered by two General Electric Company J85-GE-5A engines. The aircraft is manufactured by Northrop Corporation and code named the Talon. The AF32A-18 noise suppressor was built by General Acoustics Corporation to provide noise level reduction for all T-38 aircraft during ground runup operations.

This volume provides measured and extrapolated data defining bioacoustic environments produced by this aircraft during ground runup operations. Such data are essential to evaluate ear protection requirements, limiting personnel exposure times, voice communication capabilities, and annoyance problems associated with ground runups of the T-38 aircraft operating in the AF32A-18 noise suppressor.

This volume is one of a series published by the Aerospace Medical Research Laboratory (AMRL) under the same report number (AMRL-TR-75-50) as a multi-volume handbook that quantifies the noise environments produced at flight/ground crew locations and in surrounding communities by operations of Air Force aircraft and ground support equipment. The far-field, community-type noise data in the handbook describe the noise produced during *ground operations* of aircraft, ground support equipment, and other ground-based equipment or facilities.

Volume 1 of this handbook discusses the objectives and design of the handbook, the types of data presented, measurement procedures, instrumentation, data processing, definitions of quantities, symbols, equations, applications, limitations, etc. Volume 2 provides a method and data for adjusting the handbook's far-field noise data, which are for *standard meteorological conditions* (15°C *temperature*, 70% *rel humidity*, 0.760 *meters Hg barometric pressure*), *to* derive comparable data for other meteorological conditions. *Refer to Volumes 1 and 2* (references 1 and 2) for such information because it is not repeated in other handbook volumes.

A cumulative index lists those aerospace systems contained in the handbook, and identifies the specific volumes containing each type of environmental noise data available (i.e., inflight/flight crew and passenger noise, near-field/ground crew noise, far-field/community noise). Volume numbers are assigned sequentially as individual volumes are published. This index is periodically updated as individual volumes are published and is available upon request from AMRL/BBE, Wright-Patterson AFB, OH 45433. Organizations on the distribution list for the handbook will automatically receive a copy of each updated index.

Direct any questions concerning the technical data in this report and other handbook volumes to: AMRL/BBE, Wright-Patterson AFB, OH 45433; AUTOVON 78-53675 or 78-53664; Commercial (513) 255-3675 or (513) 255-3664.

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1. Cole, John N., *USAF Bioenvironmental Noise Data Handbook Volume 1: Organization, Content and Application*, AMRL-TR-75-50 (1), Aerospace Medical Research Laboratory, Wright-Patterson Air Force Base, Ohio, 1975.

2. Cole, John N., *USAF Bioenvironmental Noise Data Handbook, Volume 2: Procedure to Evaluate Effects of Non-standard Meteorological Conditions on Far-Field Noise*, AMRL-TR-75-50 (2), AMRL, WPAFB, OH, 1975.

NEAR-FIELD NOISE

MEASUREMENTS

AMRL acquired near-field noise data on the AF32A-18 noise suppressor system during ground runup operations of the T-38 aircraft. For these tests the aircraft was located in the suppressor at Laughlin AFB with no significant reflecting surfaces in the vicinity except the ground plane. Table 1 gives the surface meteorological conditions and the five engine power conditions. The ground-crew chief selected power conditions and near-field locations generally used during routine maintenance or engine runup for preflight checks.

At each near-field location a test engineer randomly moved a hand-held microphone in and around each location, probing all areas where a crew member's head would normally be located. He recorded all the noise samples on magnetic tape. During analysis of each sample, he determined the one-third octave band root-mean-square sound pressure using a 4- or 8-second integration time to derive a power-averaged level for each location. Figure 1 shows the four near-field locations where ground crew are usually located for maintenance and/or preflight checkout operations. Estimates of noise levels at other locations are difficult in the near-field since the noise source is spatially distributed, i.e., not a point source. The noise levels at near-field locations can vary widely depending upon relative distances from each noise source (intake noise, exhaust noise, panel resonances, internal engine noise through the engine wall, etc.).

Table 1 lists the numeric/alphabetic designators used on the data pages in this report to identify the measurement locations and test conditions. For example, the designator 1/A means ground crew location 1 and test condition A.

RESULTS

The measured data presented in Table 2 define the sound pressure levels (SPL) produced by the T-38 aircraft in the AF32A-18 noise suppressor at the four ground crew locations. This table includes the overall, 1/3 octave-band, and octave band levels. From these data one can calculate the variety of measures given in Table 3, which are widely used to assess the effects of noise on personnel and their performance.

All near-field data are for the meteorological conditions at the time of test but are valid for all typical airbase meteorology because of the short sound propagation distances involved.

TABLE 1

MEASUREMENT LOCATIONS AND TEST CONDITIONS FOR NEAR-FIELD NOISE MEASUREMENTS

T-38 Aircraft Suppressor Ground Runup, Laughlin AFB Survey
Test #79-733-001, 20 February 1979

Ground Crew Location

1	Wing Tip Position
2	Leak Check Position
3	Engine Maintenance Position
4	Cockpit (Open Canopy)

Aircraft Engine Operation

A	Idle Power (50% RPM), 500 LBS/HR, Fuel Flow
B	80% RPM, 1850 LBS/HR, Fuel Flow
C	90% RPM, 1900 LBS/HR, Fuel Flow
D	Military Power (100% RPM), 2200 LBS/HR, Fuel Flow
E	Afterburner Power, 2200 LBS/HR, Fuel Flow

Meteorology Meteorology

Temperature	9 C
Bar Pressure	.760 M Hg
Rel Humidity	86 %
Wind — Speed	2 M/Sec (4 KTS)
— Direction	120 Deg

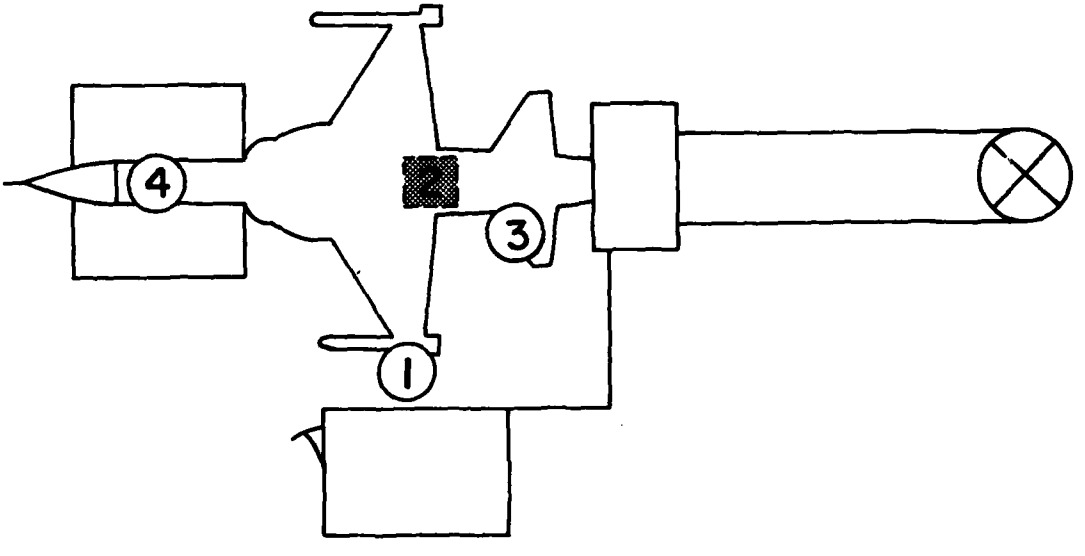


Figure 1. Near-Field Measurement Locations at Laughlin AFB TX

FAR-FIELD NOISE

MEASUREMENTS

AMRL acquired far-field data during a 1- 2-hour test period, thus keeping similar meteorological conditions. Figure 2 shows the ground runup pad, ground cover, aircraft orientation and the 19 microphone measurement sites on a semicircle. The center of the 100 meter radius semicircle used in surveying the AF32A-18 noise suppressor was on the ground directly below the center of the exhaust stack.

Table 4 provides cockpit readouts of engine characteristics (% RPM, fuel flow, etc.) for each power setting used in the far-field tests. Also listed in this table are the surface meteorological conditions during data acquisition.

All microphone measurement sites are in the acoustic far-field of their source where the sound wave-fronts spherically diverge and the noise source may be regarded as a point source.

A portable microphone/tape-recorder system was used to sequentially record the noise at each far-field location. The microphone was attached to a hand held pole, pointed at the source (0° angle of incidence) and vertically scanned from 0.5 to 3 meters for a period of 5-10 seconds during data acquisition at each microphone location. These samples were then time-integrated to derive a root-mean-square sound pressure level. Vertical scanning and time-integrating together reduce anomalies frequently present in data acquired by a fixed height microphone.

RESULTS

Table 5 lists the overall and 1/3 octave band SPL measured at the far-field locations under meteorological conditions at the time of the test. Data in all other figures and tables are based on these levels. These data were normalized to 100 meters distance and standard meteorological conditions (15°C temperature, 70% relative humidity, 0.760 meter Hg barometric pressure) and used to derive the graphic data in Figure 3 which provides a compact summary of the far-field noise characteristics of the T-38 aircraft operating in the AF32A-18 noise suppressor in a standard format.

Estimates of the noise levels for intermediate power settings (e.g., 95% RPM) and/or different number of engines operating (e.g., single engine) can be determined as explained in Volume 1 of this handbook.

Figures 4 through 10 are sets of equal noise contours describing seven different measures of noise as a function of angle and distance from the source for standard day meteorology. They are respectively, overall sound pressure level, C-weighted sound level, A-weighted sound level, perceived noise level, speech interference level, permissible exposure times for personnel and octave band sound pressure levels.

Data excessively influenced by spurious background/electronic noise were eliminated from all figures and tables.

Test personnel performed noise surveys during quiet periods when the background noise was minimal, e.g., early in the morning when no other aircraft or engine test stands were operating. Data eliminated because they were near the background/electronic noise were generally not significant because the levels were so low.

Volume 2 of the handbook describes the influence of meteorology on far-field noise environments, and provides, if required, the factors necessary to adjust the handbook's standard meteorological day data.

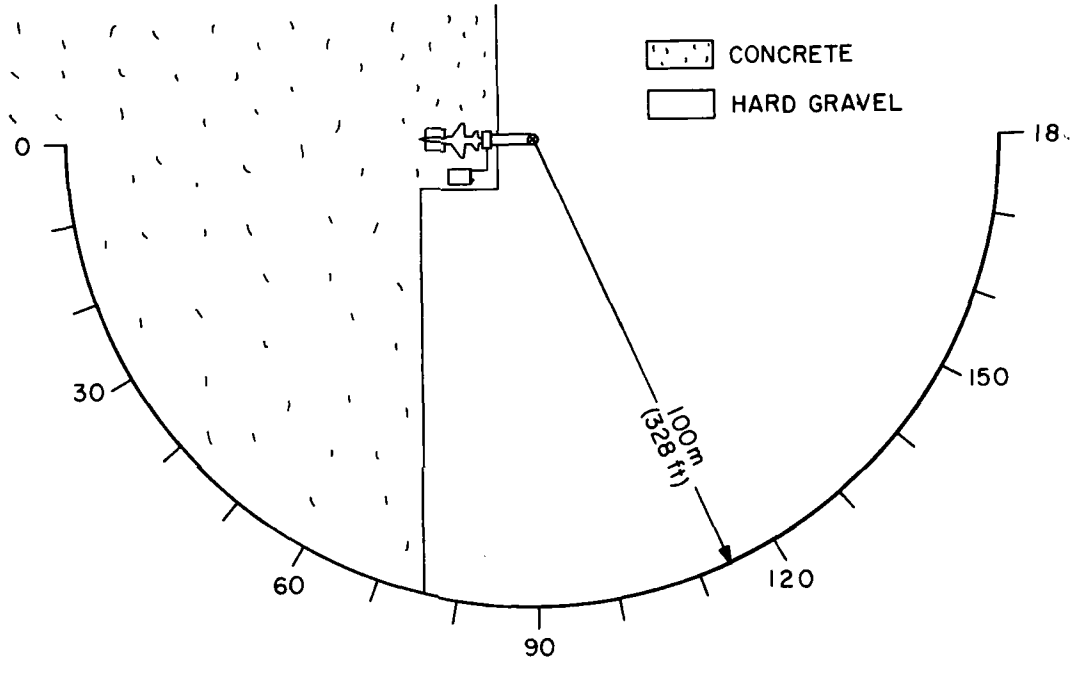


Figure 2. Far-Field Measurement Locations at Laughlin AFB TX

TABLE: 2 MEASURED SOUND PRESSURE LEVEL (DB) 1/3 OCTAVE BAND

IDENTIFICATION:
OMEGA 3.2
TEST 79-733-001
RUN 01
06 APR 79
PAGE F1

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18 SUPPRESSOR
GROUND CREW
NEAR-FIELD NOISE LEVELS

OPERATION:
A= IDLE POWER
B= 80% RPM
C= 90% RPM

FREQ (HZ)	LOCATION/CONDITION 1/A	2/A	3/A	4/A	1/B	2/B	3/B	4/B	1/C	2/C	3/C	4/C
25	78	81	79	74	86	90	89	84	91	94	94	90
31.5	81	87	80	75	95	97	89	92	100	100	93	95
40	82	94	82	81	91	94	86	89	96	99	90	96
50	82	97	87	86	85	96	88	85	90	100	94	91
63	81	93	86	76	87	99	93	85	92	104	100	89
80	77	92	85	79	86	103	93	88	89	108	98	93
100	82	93	90	77	90	103	93	86	92	108	95	91
125	90	93	101	80	94	99	99	83	95	104	100	87
160	89	94	94	81	92	100	98	87	95	103	99	91
200	83	96	89	76	92	108	99	83	91	106	97	85
250	79	91	87	79	93	105	99	85	95	10[illegible]	105	89
315	81	95	90	76	93	105	100	83	95	106	100	86
400	89	100	91	78	95	106	103	87	98	109	102	87
500	81	91	89	76	95	105	103	89	101	111	105	93
630	81	91	88	76	94	101	102	89	100	106	105	93
800	83	93	91	76	96	103	105	88	100	106	107	94
1000	84	94	92	76	97	105	106	87	103	108	109	93
1250	86	95	92	78	96	105	106	87	102	107	109	92
1600	89	95	95	80	97	104	106	87	101	107	110	92
2000	87	94	94	81	98	103	106	89	101	106	110	92
2500	89	94	95	81	99	104	108	90	100	106	109	92
3150	88	93	95	81	99	106	108	91	99	107	108	91
4000	96	102	99	92	104	109	109	93	101	108	109	93
5000	88	94	94	82	97	105	107	87	100	108	107	92
6300	87	93	94	82	101	105	109	92	97	106	106	91
8000	93	100	97	89	98	103	107	90	96	107	107	90
10000	85	93	92	81	95	102	106	88	95	105	104	88
OVERALL	102	109	108	96	110	118	118	103	113	121	120	106

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 3

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18 SUPPRESSOR
GROUND CREW
NEAR-FIELD NOISE LEVELS

OPERATION:
D= MILITARY POWER
E= AFTERBURNER POWER

IDENTIFICATION:
OMEGA 3.2
TEST 79-733-001
RUN 02

06 APR 79

	LOCATION/CONDITION							
FREQ (HZ)	1/D	2/D	3/D	4/D	1/E	2/E	3/E	4/E
25	94	100	96	92	100	104	103	98
31.5	99	104	97	98	100	106	100	100
40	100	102	94	99	102	104	97	101
50	93	105	97	94	101	112	101	100
63	94	106	101	90	101	110	108	98
80	93	111	102	98	98	112	106	101
100	96	110	98	96	99	111	104	103
125	99	106	104	88	101	106	106	94
160	94	106	104	92	102	108	105	94
200	91	109	98	88	96	112	102	91
250	94	106	106	89	96	106	106	91
315	96	106	102	87	96	105	102	87
400	101	110	102	90	103	113	105	89
500	105	111	104	96	108	117	107	100
630	104	110	102	98	110	113	106	104
800	105	110	104	100	107	113	107	102
1000	106	111	105	97	108	113	109	99
1250	105	112	104	95	107	114	109	98
1600	107	114	105	97	107	114	106	98
2000	106	112	104	95	106	113	106	96
2500	103	111	101	94	105	114	104	96
3150	102	110	100	93	104	114	103	96
4000	102	110	99	94	104	115	103	96
5000	97	106	95	90	100	111	100	92
6300	100	109	95	91	101	113	98	93
8000	94	103	92	88	97	107	95	90
10000	91	101	88	83	94	105	92	86
OVERALL	116	123	116	109	118	126	119	112

LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 2 MEASURED SOUND PRESSURE LEVEL (DB) OCTAVE BAND

IDENTIFICATION:
OMEGA 3.2
TEST 79-733-001
RUN 01
06 APR 79
PAGE J1

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18 SUPPRESSOR
GROUND CREW
NEAR-FIELD NOISE LEVELS

OPERATION:
A= IDLE POWER
B= 80% RPM
C= 90% RPM

FREQ (HZ)	LOCATION/CONDITION 1/A	2/A	3/A	4/A	1/B	2/B	3/B	4/B	1/C	2/C	3/C	4/C
31.5	85	95	85	82	96	99	93	94	101	103	97	99
63	85	99	91	87	91	105	96	91	95	110	102	96
125	93	98	102	84	97	106	102	90	99	110	103	95
250	86	99	94	82	97	111	104	89	99	111	106	92
500	90	101	94	81	99	109	107	93	105	114	109	96
1000	89	99	96	81	101	109	110	92	106	112	113	98
2000	93	99	99	86	103	108	111	94	106	111	114	97
4000	97	103	101	92	105	112	113	96	104	112	113	97
8000	94	101	100	90	103	108	112	95	101	111	111	95
OVERALL	102	109	108	96	110	118	118	103	113	121	120	106

TABLE: 2 — MEASURED SOUND PRESSURE LEVEL (DB) OCTAVE BAND

IDENTIFICATION: OMEGA 3.2 / TEST 79-733-001 / RUN 02 / 06 APR 79 / PAGE J2

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18 SUPPRESSOR GROUND CREW NEAR-FIELD NOISE LEVELS

OPERATION: D= MILITARY POWER; E= AFTERBURNER POWER

FREQ (HZ)	LOCATION/CONDITION 1/D	2/D	3/D	4/D	1/E	2/E	3/E	4/E
31.5	103	107	100	102	105	109	105	105
63	98	113	105	100	105	116	110	104
125	101	112	107	98	105	114	110	104
250	99	112	108	93	101	114	108	95
500	108	115	107	101	112	120	111	105
1000	110	116	109	102	112	118	113	105
2000	110	117	108	100	111	119	110	101
4000	106	114	103	97	108	118	107	99
8000	101	110	97	93	103	114	100	95
OVERALL	116	123	116	109	118	126	119	112

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

IDENTIFICATION:
OMEGA 3.2
TEST 79-733-001
RUN 01
06 APR 79
PAGE H1

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18 SUPPRESSOR
GROUND CREW
NEAR-FIELD NOISE LEVELS

OPERATION:
A= IDLE POWER
B= 80% RPM
C= 90% RPM

	LOCATION/CONDITION											
	1/A	2/A	3/A	4/A	1/B	2/B	3/B	4/B	1/C	2/C	3/C	4/C
HAZARD/PROTECTION												
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR												
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR												
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)												
NO PROTECTION												
OASLC	101	109	107	95	110	118	118	102	112	120	119	105
OASLA	101	108	106	96	110	117	116	101	112	119	120	104
T	25	8	11	60	5	P	P	25	3.8	P	P	15
MINIMUM QPL EAR MUFFS												
OASLA*	76	84	83	70	84	93	92	77	86	96	93	80
T	960	480	571	960	480	101	120	960	339	60	101	960
AMERICAN OPTICAL 1700 EAR MUFFS												
OASLA*	71	79	78	66	78	88	86	71	80	91	88	75
T	960	960	960	960	960	240	339	960	960	143	240	960
V-51R EAR PLUGS												
OASLA*	72	81	78	67	82	90	90	73	85	93	92	77
T	960	807	960	960	679	170	170	960	404	101	120	960
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS												
OASLA*	58	67	65	52	68	76	77	60	72	79	79	64
T	960	960	960	960	960	960	960	960	960	960	960	960
H-133 GROUND COMMUNICATION UNIT												
OASLA*	72	79	78	66	82	89	91	74	84	91	92	76
T	960	960	960	960	679	202	143	960	480	143	120	960
COMMUNICATION												
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)												
PSIL	91	100	97	83	101	109	110	93	106	112	112	97
ANNOYANCE												
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)												
TONE CORRECTION (C IN DB)												
PNLT	119	126	123	115	127	133	133	117	125	134	134	119
C	3	3	2	3	2	1	1	1	0	1	1	1

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.
P ADDITIONAL EAR PROTECTION REQUIRED.

TABLE: MEASURES OF HUMAN NOISE EXPOSURE

3

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18 SUPPRESSOR
GROUND CREW
NEAR-FIELD NOISE LEVELS

OPERATION:
D= MILITARY POWER
E= AFTERBURNER POWER

IDENTIFICATION:
OMEGA 3.2
TEST 79-733-001
RUN 02

06 APR 79

PAGE H2

	LOCATION/CONDITION							
	1/D	2/D	3/D	4/D	1/E	2/E	3/E	4/E
HAZARD/PROTECTION								
C-WEIGHTED OVERALL SOUND LEVEL (OASLC IN DBC) AT EAR								
A-WEIGHTED OVERALL SOUND LEVEL (OASLA IN DBA) AT EAR								
MAXIMUM PERMISSIBLE TIME (T IN MINUTES) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)								
NO PROTECTION								
OASLC	115	123	116	108	118	126	119	112
OASLA	115	122	114	106	117	125	117	109
T	2.2	P	2.7	11	P	P	P	6
MINIMUM QPL EAR MUFFS								
OASLA*	89	98	91	83	92	101	94	87
T	202	42	143	571	120	25	85	285
AMERICAN OPTICAL 1700 EAR MUFFS								
OASLA*	83	93	86	78	86	95	89	82
T	571	101	339	960	339	71	202	679
V-51R EAR PLUGS								
OASLA*	89	95	88	81	91	98	91	84
T	202	71	240	807	143	42	143	480
AMERICAN OPTICAL 1700 EAR MUFFS PLUS V-51R EAR PLUGS								
OASLA*	75	82	74	67	77	84	78	71
T	960	679	960	960	960	480	960	960
H-133 GROUND COMMUNICATION UNIT								
OASLA*	88	95	86	79	89	97	90	82
T	240	71	339	960	202	50	170	679
COMMUNICATION								
PREFERRED SPEECH INTERFERENCE LEVEL (PSIL IN DB)								
PSIL	110	116	108	101	112	119	111	104
ANNOYANCE								
PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT IN PNDB)								
TONE CORRECTION (C IN DB)								
PNLT	128	136	128	120	130	140	130	123
C	1	1	1	1	1	2	1	1

* BASED ON CALCULATED SPL SPECTRUM UNDER PROTECTIVE DEVICE.
P ADDITIONAL EAR PROTECTION REQUIRED.

TABLE 4

TEST CONDITIONS FOR FAR-FIELD NOISE MEASUREMENTS

T-38 Aircraft In The AF32-18 Noise Suppressor
Laughlin AFB TX
Test #77-733-001, 1 September 1977

Aircraft Engine Operation

Idle	Single Engine 48 % 517 C, EGT 500 LBS/HR, Fuel Flow
79% RPM	Single Engine 75 % rpm 405 C, EGT 790 LBS/HR, FF
94% RPM	Single Engine 94 % RPM 500 C, EGT 1425 LBS/HR, FF
Military Power	Single Engine 99.5 % RPM 635 C, EGT 2100 LBS/HR, FF
Afterburner Power	Single Engine 100 % RPM 635 C, EGT 2100 LBS/HR, FF

Meteorology

Temperature	30 C
Bar Pressure	.762 M Hg
Rel Humidity	51 %
Wind — Speed	Calm
— Direction	Calm

TABLE: 5

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-16-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 30 C
BAR PRESS = .762 M HG
REL HUMID = 51 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25												68<	74<	79	78	74<	73<	74<	75<
31.5													70<	76	76	68<	71<	70<	72<
40		65<										66<	71<	76	76	68<	69<	69<	71<
50	69<	70<	65<	66<	65<	66<	69<	63<	65<	63<	66<	68<	70<	73	72	67<	67<	68<	70<
63	67<												69<	73<	72<				
80						66<							67<	70<	73<	65<	68<		66<
100				65<									67<	71<	73<	70<	70<	68<	66<
125	70	68<	68<	68<	70	68<	66<	64<	59<	65<	63<	66<	69	72	73	70	67<	67<	68<
160	63<	64<	66	67	67	66	62<	62<	59<	62<	61<	62<	63<	64<	68	60<	60<	63<	62<
200	60<	60<	62<	60<	61<	60<	57<	56<	55<			57<	61<	64<	67	58<	56<	58<	56<
250	59<	58<	61<	59<	58<	57<	58<						59<	64<	64<	57<	55<	61<	57<
315	61<	62	64	63	59<	58<	58<	55<	56<			51<	57<	62	63	53<			
400	58<	62	62	63	58<	60	56<	55<	52<			49<	55<	60	62				
500	52<	56<	60<	58<	56<	53<	53<							56<	58<				
630	53<	57<	60<	56<	56<	53<									52<				
800	52<	58<	62	58<	56<	55<	53<												
1000		58<	60<	58<	57<	54<	53<												
1250		58<	61<	58<	58<	54<	53<	52<											
1600	54<	65	65	63	62	59<	56<	55<	53<	51<	50<	51<	53<	53<	56<	56<	55<	55<	
2000	54<	63	66	65	64	61	57<	56<	53<	51<	52<	53<	53<	53<	57<	56<	54<	54<	
2500	50<	61	64	64	62	58<	55<	51<			50<	52<	53<	54<	56<	56<	52<	49<	
3150		60<	65	64	63	58<	54<	51<					51<	56<	57<	56<	51<		
4000	60	68	70	68	68	65	64	60	55<	55	58	58	59	59	62	62	61	60	56
5000	52	61	63	63	63	60	55	53	48	50	51	53	54	56	58	56	53	51	48
6300	52	60	63	62	62	57	52	49	46	46	48	50	53	56	57	54	52	49	47
8000	60	66	67	67	64	60	58	55	51	51	52	55	57	60	58	58	58	57	54
10000	50	56	58	57	56	50	48	45	41<	42<	43	45	47	50	49	49	48	45	41<
OVERALL	75	77	78	77	76	75	73	70	68	69	69	74	80	84	84	79	79	78	79

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 02
14 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 30 C
BAR PRESS = .762 M HG
REL HUMID = 51 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	72<	71<	71<	70<	71<	72<	68<	70<	71<	72<	71<	73<	72<	75<	75<	73<	77	76	72<
31.5	68<	70<	70<	70<	71<	72<	70<	70<	70<	68<	70<	70<	69<	70<	72<	71<	72<	72<	70<
40	70<	70<	71<	71<	72<	73<	71<	69<	71<	70<	72<	71<	69<	70<	72<	72<	73<	72<	71<
50	71<	69<	70<	69<	71<	72	70<	68<	68<	69<	72	71<	69<	70<	71<	72	70<	70<	68<
63	71<	68<	69<	68<	70<	72<	69<				71<	70<	70<	69<	69<	69<	67<	68<	68<
80	67<	66<	67<	65<	68<	70<	68<	65<	65<	65<	66<	66<	65<		66<				
100	69<	70<	72<	72<	71<	71<	74<	69<	70<	68<	70<	72<	72<	66<	68<	66<	65<	67<	66<
125	70	70	69	69	69	70	68<	65<	67<	67<	67<	71	73	64<	64<	63<	61<	61<	62<
160	70	71	72	74	72	70	66	67	71	67	69	69	67	64<	63<	63<	62<	61<	62<
200	70	65<	66<	68	67	65<	62<	63<	65<	61<	69	69	67	63<	61<	60<	57<	55<	58<
250	69	69	68	69	68	67	60<	62<	70	65<	67	68	68	60<	59<	59<	56<		55<
315	66	65	67	68	67	66	63	60<	68	61<	68	63	61<	57<	57<	56<	51<		
400	62	62	65	62	60	57<	58<	55<	58<	53<	63	59<	55<	50<	54<	52<			
500	61<	61<	62<	62<	59<	55<	58<	55<	54<		57<	56<							
630	61<	58<	59<	59<	55<		53<	54<	52<		53<	52<							
800	59<	56<	55<	57<	52<		52<	52<			53<	52<							
1000	60<	56<	55<	57<	52<		53<				54<	53<							
1250	59<	56<	53<	55<			51<				52<	55<							
1600	61	61	55<	57<	63						55<	60<	55<		54<	55<	55<	55<	52<
2000	60	58<	55<	58<	52<		50<				54<	60<	55<		55<	56<	56<	57<	52<
2500	58<	57<	52<	55<	49<						49<	54<	51<		55<	57<	57<	54<	52<
3150	58<	56<	52<	55<								53<			58<	60<	58<	54<	52<
4000	63	61	56	59	52<	45<	52<	51<		45<	55<	61	55<	53<	62	65	63	61	55
5000	59	55	50	53	47	40<	46<	47	40<	42<	48	52	50	50	59	61	58	54	52
6300	63	56	52	55	48	42<	47	49	43<	43<	46	50	49	49	57	60	59	55	54
8000	59	57	52	54	46	38<	46	47	40<	41<	42<	48	47	51	58	60	58	55	50
10000	53	50	45	49	41<		40<	39<	33<	34<	36<	41<	40<	41<	49	51	49	46	44
OVERALL	81	80	81	81	81	81	80	78	80	78	81	81	80	79	80	80	80	80	78

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 30 C
BAR PRESS = .762 M HG
REL HUMID = 51 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	76	76	75<	74<	74<	74<	76	76	78	80	75<	75<	75<	79	75<	77	75<	77	78
31.5	77	76	78	76	74<	80	78	74<	75<	77	79	78	78	76	77	76	77	76	76
40	78	79	79	80	80	80	80	79	79	80	80	78	78	79	79	78	80	78	80
50	77	78	79	78	78	78	79	77	80	80	79	77	78	79	80	79	79	77	79
63	82	81	80	80	80	80	80	80	80	80	80	80	80	80	79	79	80	79	82
80	78	76	77	76	76	74<	76	76	77	77	75<	76	76	76	76	76	76	76	76
100	74<	76	73<	74<	73<	71<	73<	76	73<	71<	71<	71<	71<	72<	71<	71<	70<	70<	69<
125	78	77	77	75	74	73	72	74	69	70	70	67<	69	71	69	71	67<	70	72
160	76	73	74	73	71	68	69	69	69	69	66	66	68	67	69	68	64<	67	68
200	71	70	71	69	67	65<	66	66<	65<	65<	63<	63<	62<	65<	65<	64<	62<	60<	63<
250	70	69	71	72	67	68	68	68	68	69	64<	65<	62<	66	63<	64<	58<	58<	57<
315	67	68	70	68	64	67	65	67	66	66	62<	61<	59<	61<	59<	59<	58<	53<	52<
400	66	69	73	68	65	65	62	61	58<	58<	55<	54<	54<	57<	58<	57<	68		49<
500	64	66	70	67	65	64	61<	61<	57<	54<	57<	53<	54<	55<	55<	55<	62<		
630	65	65	67	64	63	60<	59<	58<	52<	52<	53<	52<	53<	52<	52<	52<	69	53<	51<
800	63	63	63	64	60<	60<	59<	57<	51<		54<	53<	54<	52<	53<	53<	68	56<	54<
1000	61<	64	61<	62<	60<	58<	58<	54<			53<		54<				61<	55<	53<
1250	59<	60<	57<	59<	59<	57<	56<				52<	52<	52<		52<	53<	63	56<	54<
1600	60<	63	58<	62	60<	58<	56<	50<			53<	53<	53<	53<	56<	57<	62	58<	56<
2000	61	62	57<	62	60<	59<	57<	50<			54<	54<	53<	53<	57<	57<	61	59<	56<
2500	59<	61	55<	62	57<	55<	55<	49<			52<	51<	52<	53<	55<	57<	59<	56<	54<
3150	58<	59<	54<	61<	57<	54<	54<				51<	51<	52<	53<	57<	58<	60<	56<	54<
4000	62	66	59	64	60	62	56	52<	46<	48<	54<	54<	55	57	60	64	64	61	56
5000	60	61	56	64	58	59	55	51	49	51	58	57	58	58	61	65	63	63	59
6300	57	58	52	61	55	54	52	47	45	47	52	52	53	55	58	60	59	58	54
8000	57	61	55	59	54	53	51	46	43<	44	49	49	50	56	58	58	58	56	52
10000	52	53	48	54	49	47	45	41<	38<	40<	44	44	44	47	52	52	51	50	46
OVERALL	88	87	88	87	87	87	87	86	87	87	86	86	86	87	86	86	86	85	87

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE 5: MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 30 C
BAR PRESS = .762 M HG
REL HUMID = 51 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	78	77	78	77	76	77	77	78	79	80	76	78	76	79	77	81	80	80	80
31.5	79	80	79	79	81	82	78	80	79	78	80	80	80	78	79	79	79	79	80
40	82	81	82	83	84	82	81	81	82	84	84	83	82	83	83	84	84	84	85
50	80	82	81	82	81	83	83	82	81	82	82	82	83	84	83	83	82	83	84
63	84	83	84	84	84	84	84	84	83	83	85	85	85	84	85	86	84	84	86
80	82	81	86	81	82	80	81	83	81	81	82	82	81	80	83	82	82	82	82
100	80	81	79	80	80	78	78	79	74<	75	76	77	75	79	78	76	77	78	76
125	83	81	82	80	79	77	72	79	73	71	76	75	77	76	77	77	77	76	75
160	81	78	78	78	77	75	75	75	71	66	72	72	74	74	74	74	73	74	72
200	77	73	72	72	70	71	70	69	68	64<	67	68	69	70	70	69	67	67	68
250	72	70	71	71	69	68	68	66	66	62<	65<	65<	66	66	66	64<	59<	61<	58<
315	71	73	73	73	69	66	67	67	65	59<	63	63	63	63	63	63	56<	57<	55<
400	72	76	76	76	72	68	69	67	64	58<	60	57<	58<	59<	62	63	56<	56<	57<
500	70	74	74	74	73	67	65	66	64	58<	61<	56<	57<	59<	61<	59<	56<	59<	58<
630	70	72	71	71	69	67	65	65	63	59<	58<	55<	56<	59<	60<	58<	60<	63	61<
800	66	70	69	69	68	67	67	66	64	60<	58<	54<	55<	58<	62	59<	63	66	65
1000	67	69	70	72	70	67	67	67	62<	59<	56<			54<	57<	55<	59<	62<	60<
1250	67	70	72	71	71	66	67	68	63	62<	55<	56<	52<	55<	56<	57<	59<	61<	58<
1600	65	69	70	70	68	66	66	67	64	63	55<	52<	52<	56<	60<	58<	61	62	59<
2000	64	68	69	71	67	65	65	66	63	62	53<	52<	52<	55<	61	58<	61	62	58<
2500	63	68	71	73	66	64	65	65	63	61	51<	50<	51<	54<	60	58<	59<	59<	58<
3150	62	68	69	70	65	63	63	62	60<	57<				52<	60<	58<	56<	56<	56<
4000	66	68	69	71	66	64	63	62	60	59	53<	50<	51<	57	65	63	63	61	59
5000	61	65	65	68	63	63	61	60	58	57	51	50	50	55	62	61	59	58	57
6300	66	71	68	69	68	69	67	66	62	61	57	56	56	60	67	65	65	63	62
8000	64	62	62	63	61	60	60	56	53	53	47	45	47	55	59	57	56	55	52
10000	55	55	58	57	55	54	53	50	46	46	42<	39<	41<	47	52	51	49	47	46
OVERALL	91	91	92	91	91	90	90	90	89	90	90	90	90	91	91	91	90	91	91

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

TABLE: 5

MEASURED SOUND PRESSURE LEVEL (DB)
1/3 OCTAVE BAND
DISTANCE = 100 METERS

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05
14 SEP 78
PAGE 2

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 30 C
BAR PRESS = .762 M HG
REL HUMID = 51 %

FREQ (HZ)	ANGLE (DEGREES) 0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
25	84	83	84	85	82	81	82	83	86	85	86	85	84	84	85	85	87	83	85
31.5	82	82	80	81	81	83	82	83	82	81	82	81	81	82	83	83	84	81	82
40	88	87	87	87	89	86	87	87	89	88	88	87	87	86	87	86	89	88	88
50	88	90	88	89	89	90	89	91	91	89	90	89	90	91	91	89	90	90	90
63	91	88	89	89	89	90	90	89	88	90	90	89	93	90	90	91	91	90	90
80	92	90	90	90	91	92	92	92	91	91	92	91	92	90	91	91	92	91	90
100	89	89	89	88	89	89	90	89	87	86	88	86	89	88	90	89	89	89	88
125	88	87	87	87	86	86	83	85	82	82	81	83	82	83	84	84	83	81	81
160	84	83	84	82	81	80	79	78	78	75	81	80	81	82	84	82	80	80	79
200	80	81	81	81	80	81	79	78	78	75	76	78	78	79	81	78	75	77	74
250	76	77	77	75	73	73	73	74	74	71	72	72	73	74	75	71	70	70	68
315	74	77	77	73	70	71	72	72	71	65	68	70	70	70	71	69	67	63	65
400	73	80	79	79	75	71	70	73	68	63	65	65	66	67	69	65	66	63	66
500	73	81	81	81	81	75	74	73	71	65	64	65	67	70	69	65	65	65	66
630	74	77	77	77	77	71	69	69	70	63	62	62<	65	65	65	63	66	66	66
800	69	74	78	75	71	70	69	69	68	63	62	62	64	66	67	65	70	70	69
1000	70	76	78	78	73	70	69	69	67	63<	61<	60<	62<	63<	62<	62<	66	67	65
1250	69	74	76	75	72	68	68	69	66	64	60<	60<	61<	63	62<	61<	66	67	65
1600	67	73	75	75	71	68	68	69	67	64	60<	60<	62	64	64	65	67	67	65
2000	66	71	74	75	70	66	66	68	66	63	59<	60<	62	64	64	65	66	66	65
2500	64	73	78	77	70	65	66	68	67	63	57<	59<	61	62	63	64	65	63	64
3150	62	71	76	75	67	63	64	65	64	60<	54<	55<	58<	61<	62	62	61<	60<	60<
4000	66	70	75	74	67	63	63	63	63	59	54<	55<	58	63	65	64	65	62	61
5000	60	67	70	72	65	60	61	60	59	56	52	53	56	61	61	60	61	58	58
6300	65	74	71	71	68	66	66	65	62	60	58	58	61	67	66	66	66	63	64
8000	65	65	64	65	61	59	61	56	54	53	48	48	52	60	58	57	58	54	54
10000	56	57	59	58	55	53	51	50	48	47	42<	43<	46	52	52	51	51	47	47
OVERALL	98	97	97	97	97	97	97	98	97	97	98	96	98	97	98	97	98	97	97

< LEVEL CORRECTED TO REMOVE BACKGROUND/ELECTRONIC NOISE.

FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AFJ2A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 68% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-801
RUN 01

14 SEP 78

PAGE 6

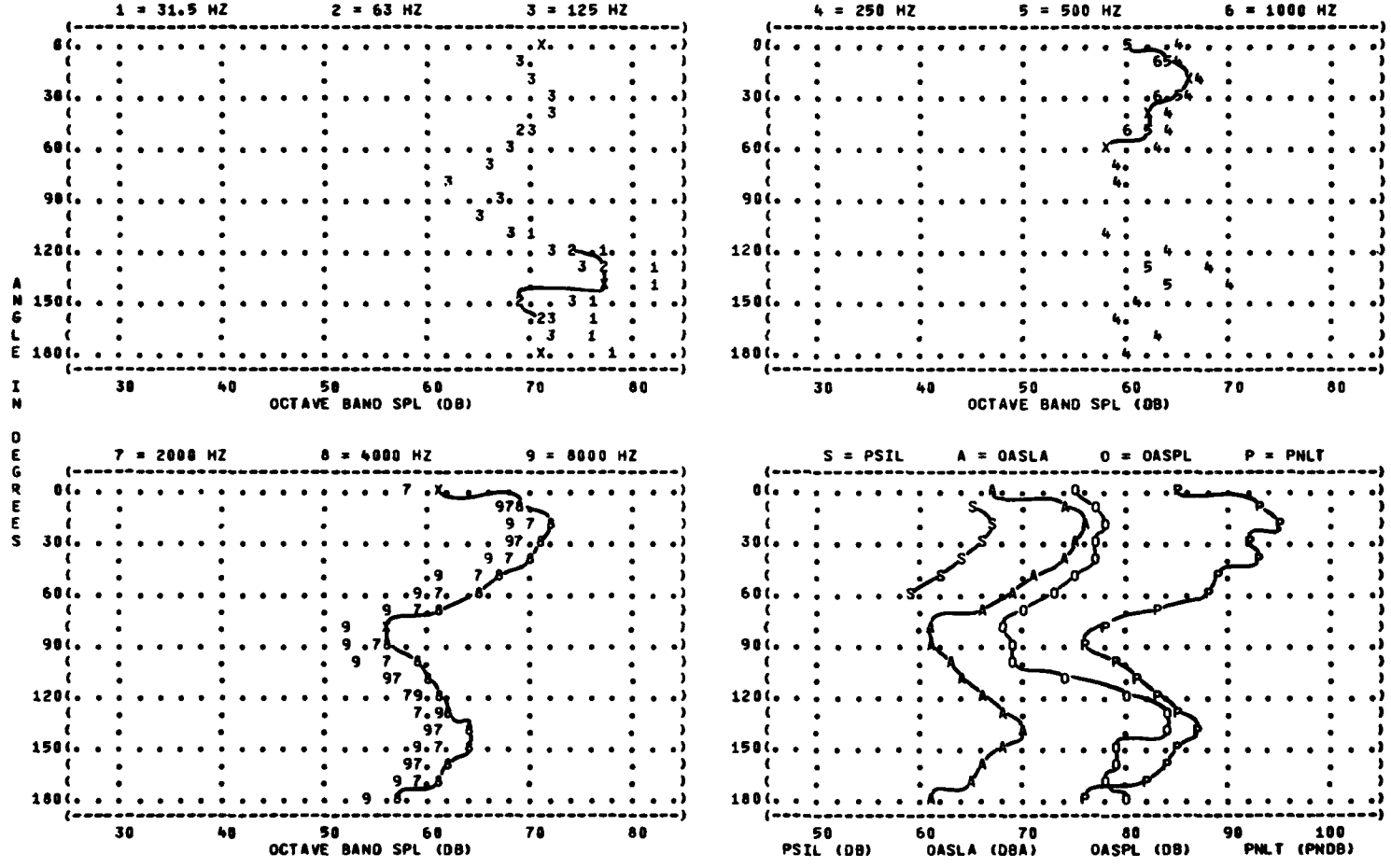


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 02
14 SEP 78
PAGE 6

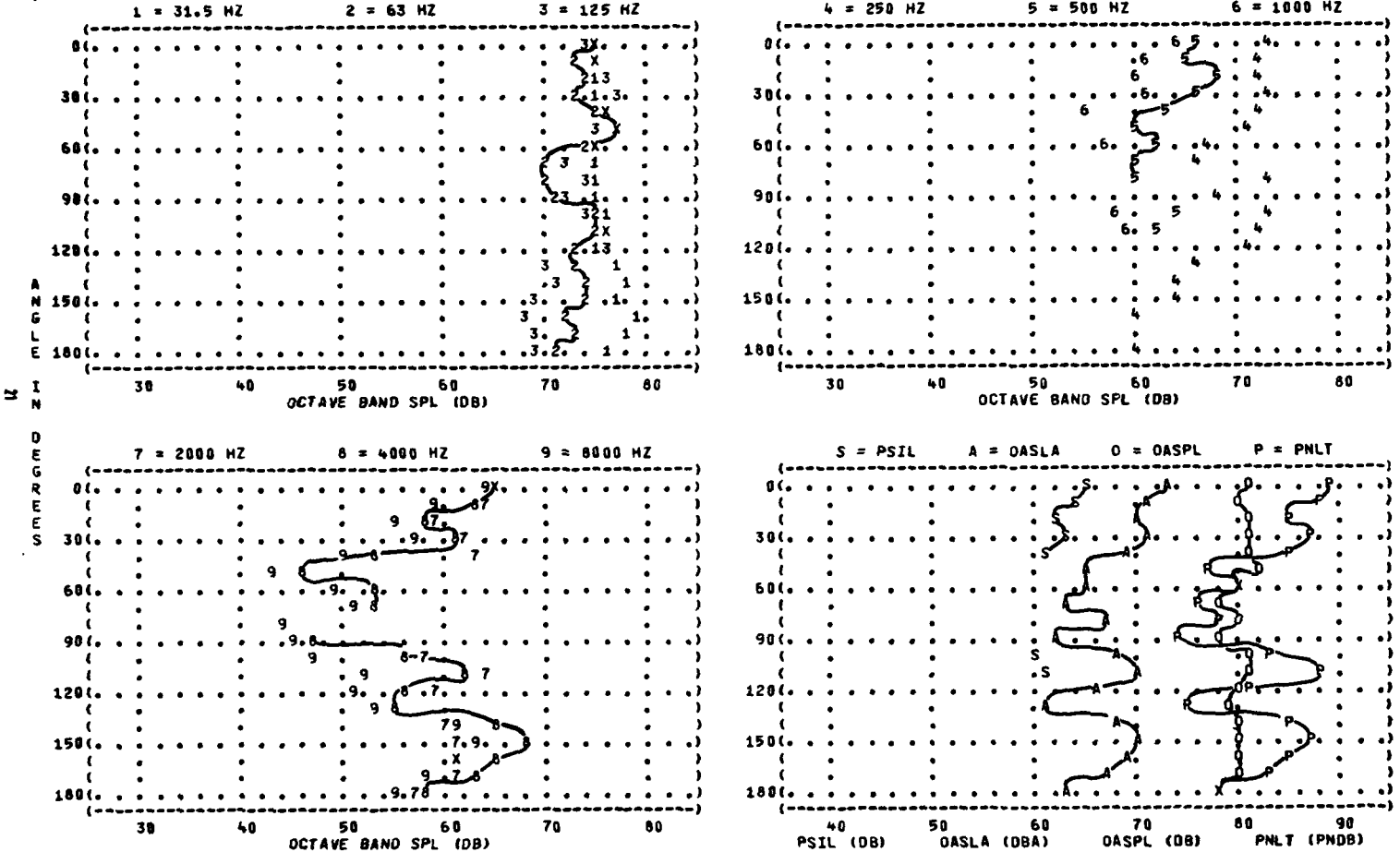


FIGURE: 3 NORMALIZED FARFIELD NOISE LEVELS

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 6

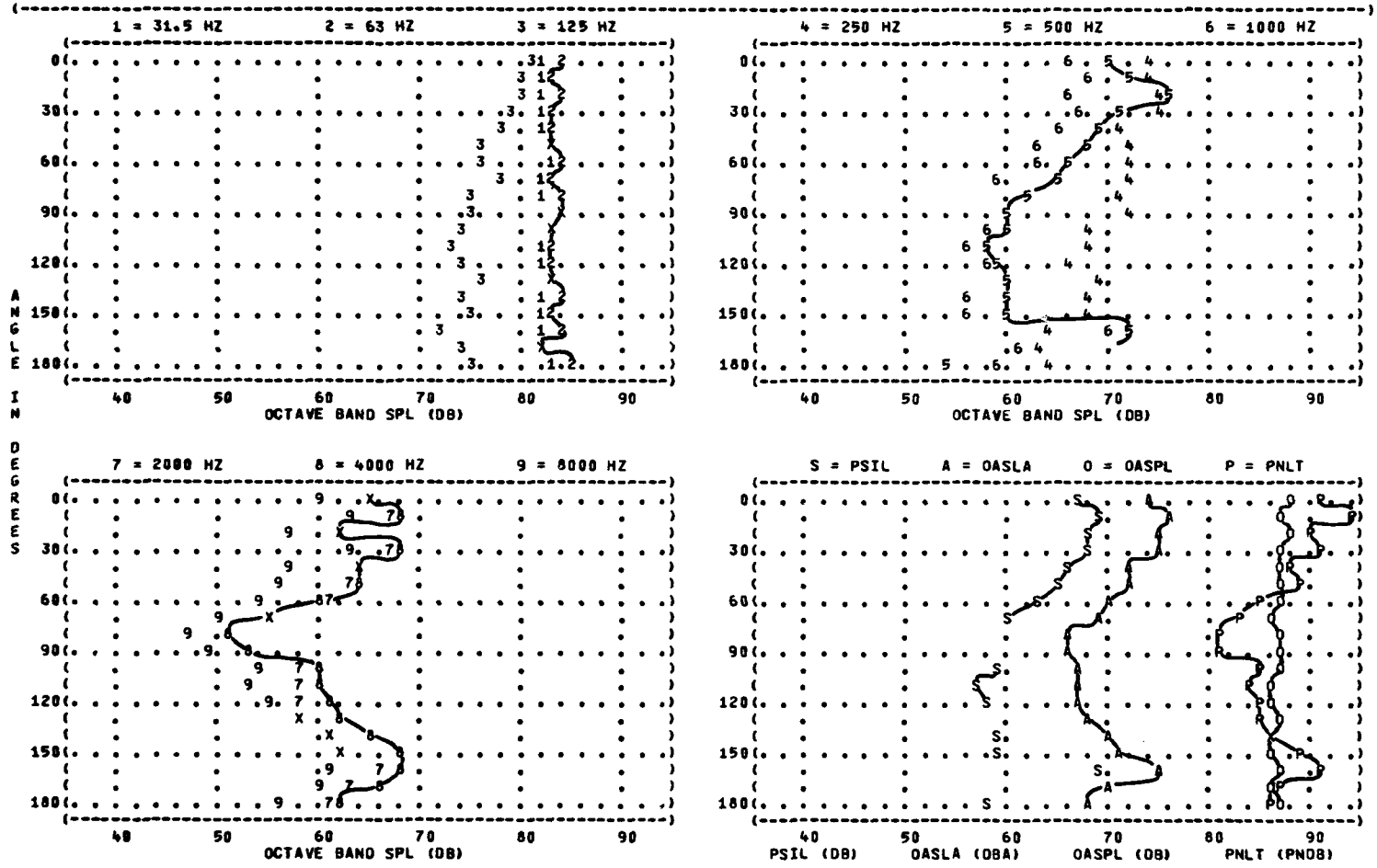


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3 DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 6

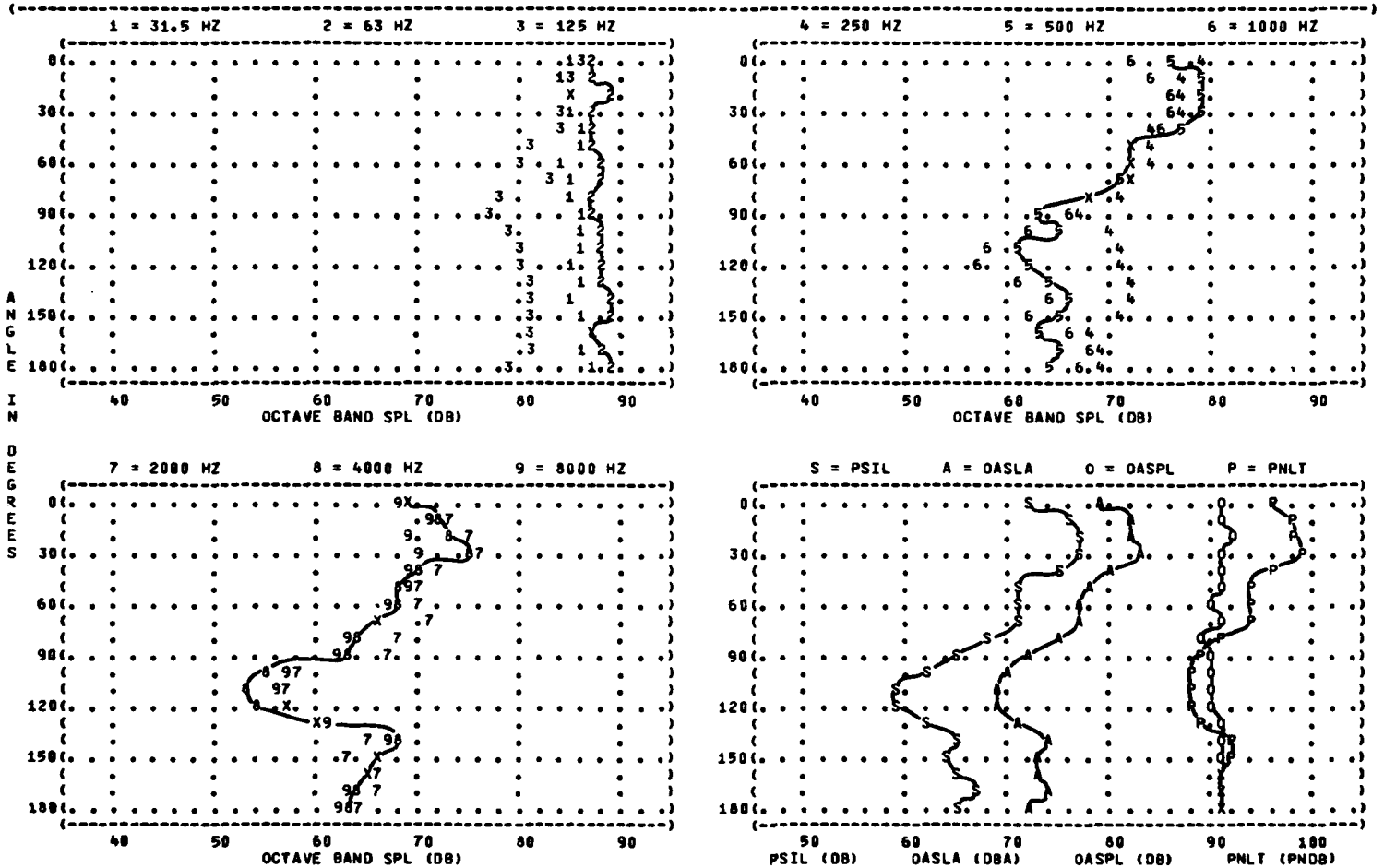


FIGURE: NORMALIZED FARFIELD NOISE LEVELS

3

DISTANCE = 100 METERS

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-601
RUN 05
14 SEP 78
PAGE 6

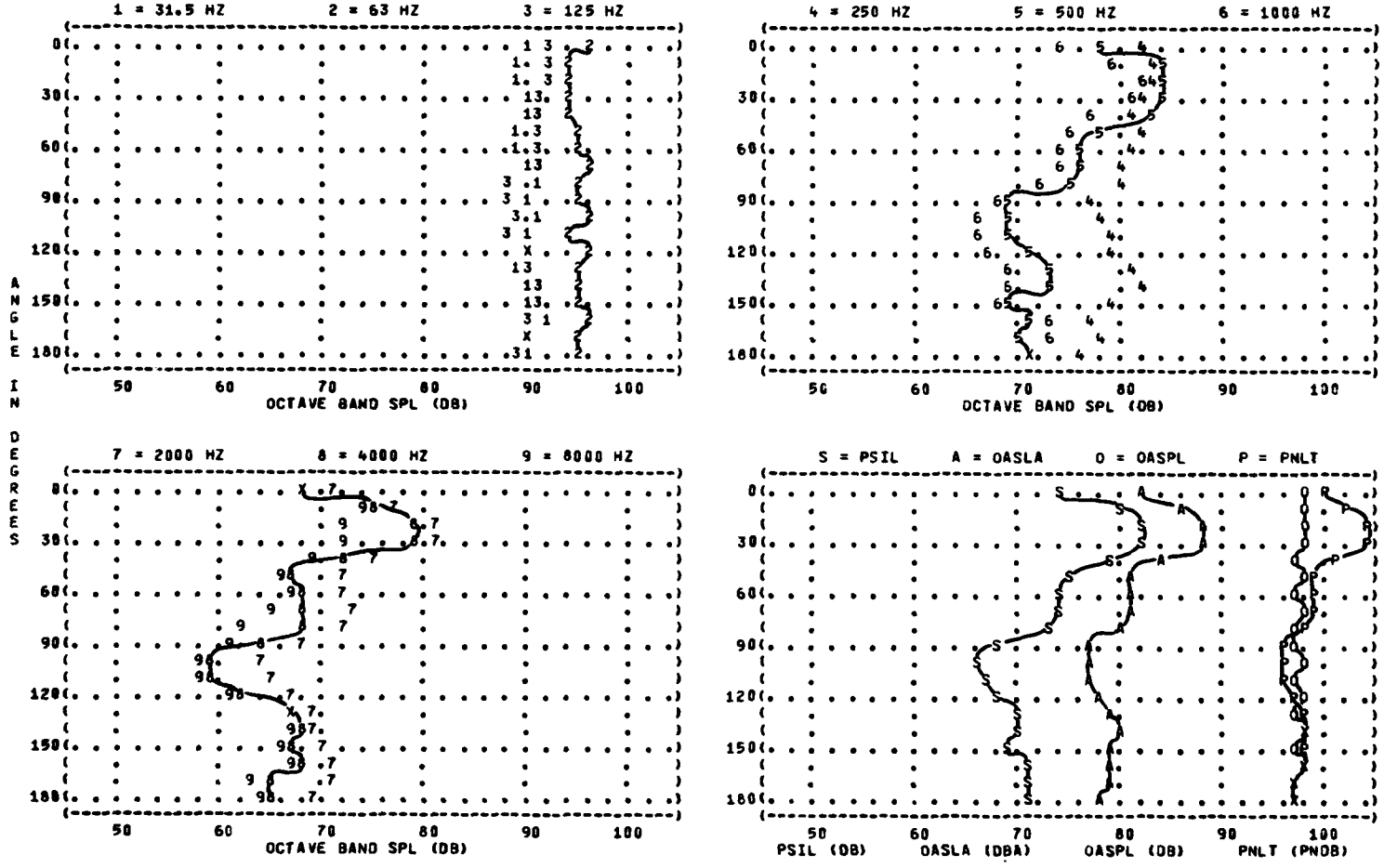


FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 13

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	88
I	85

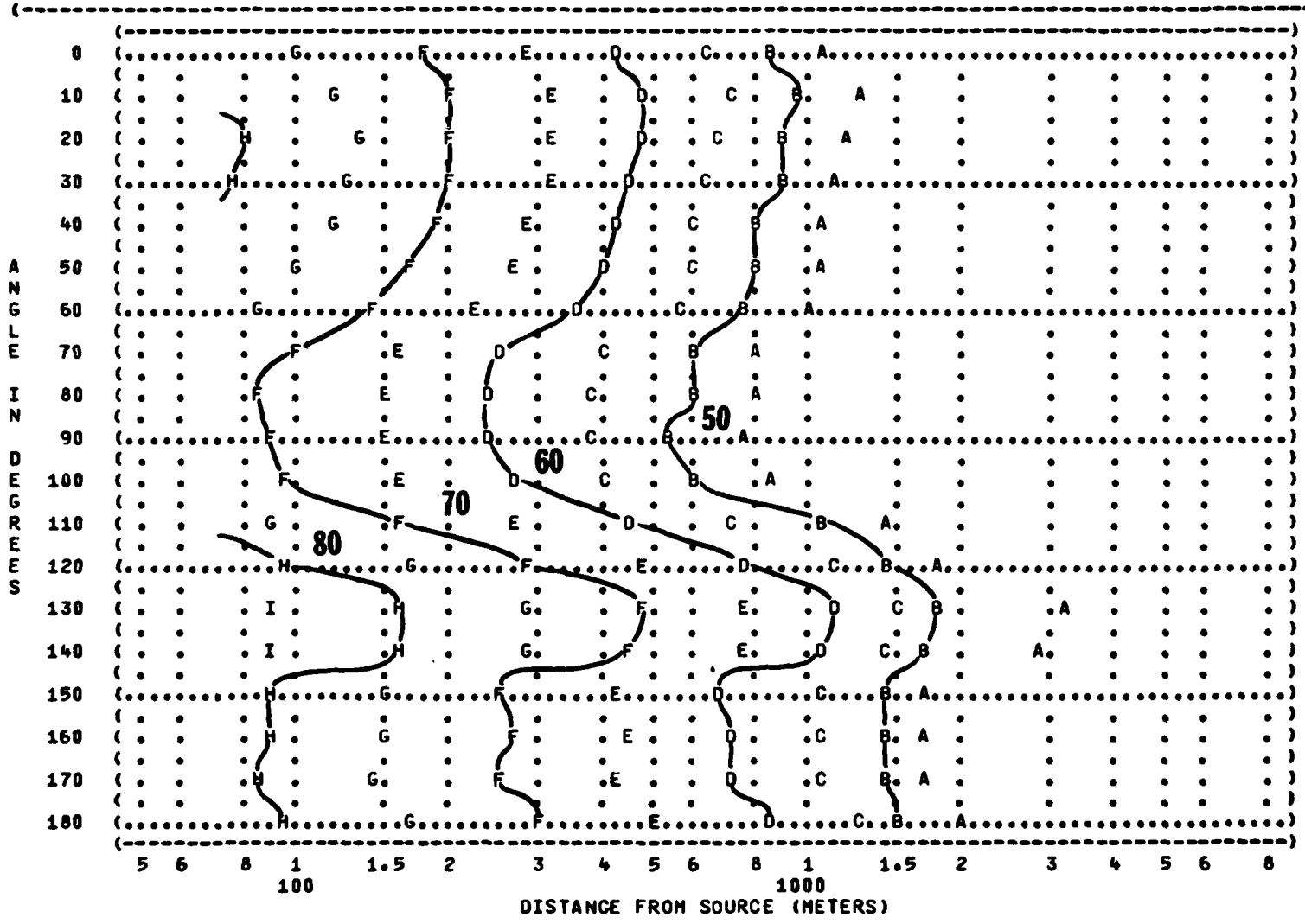


FIGURE 4: OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-081
RUN 02
14 SEP 78
PAGE 13

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80

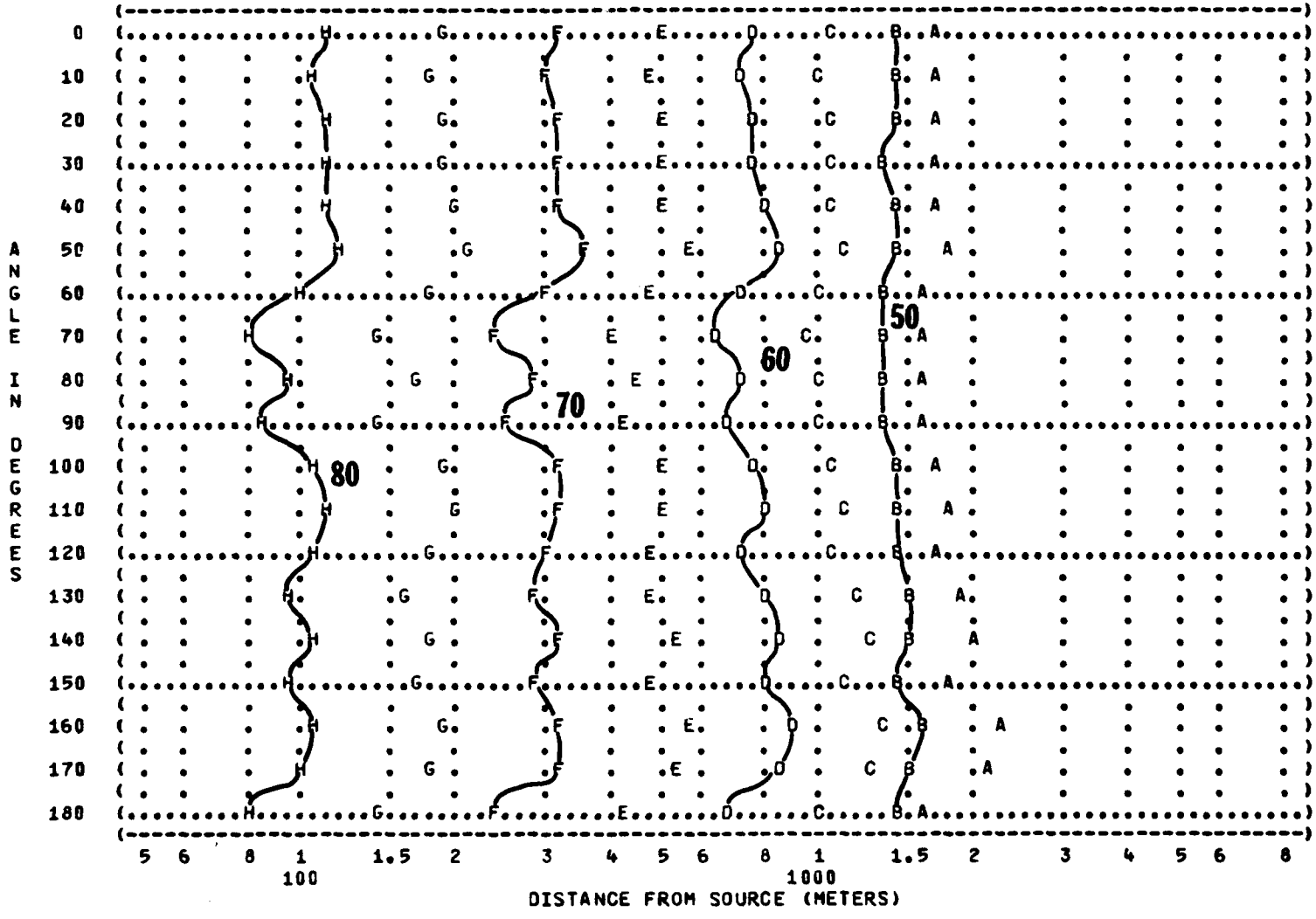


FIGURE 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 13

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

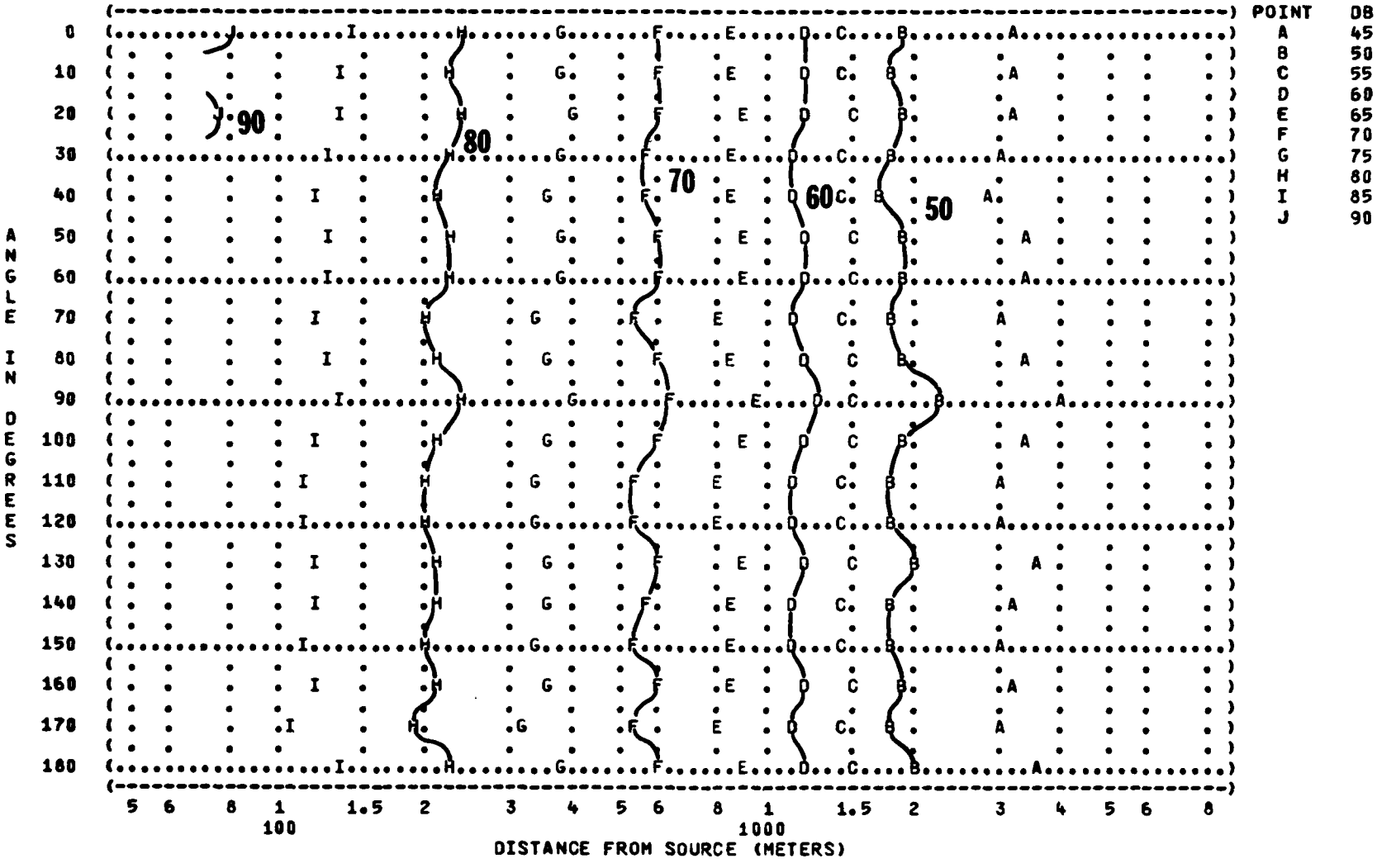


FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 13

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

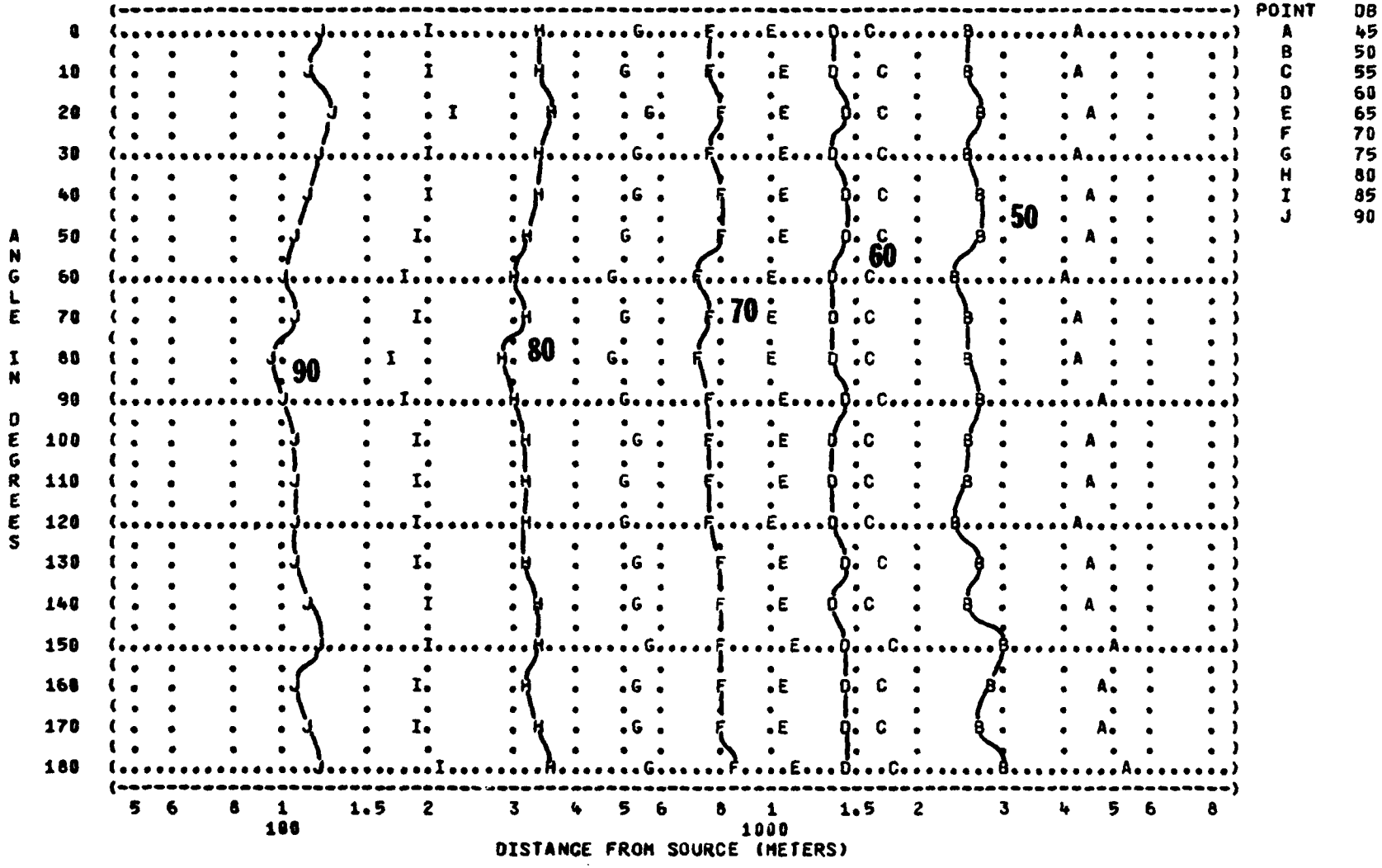


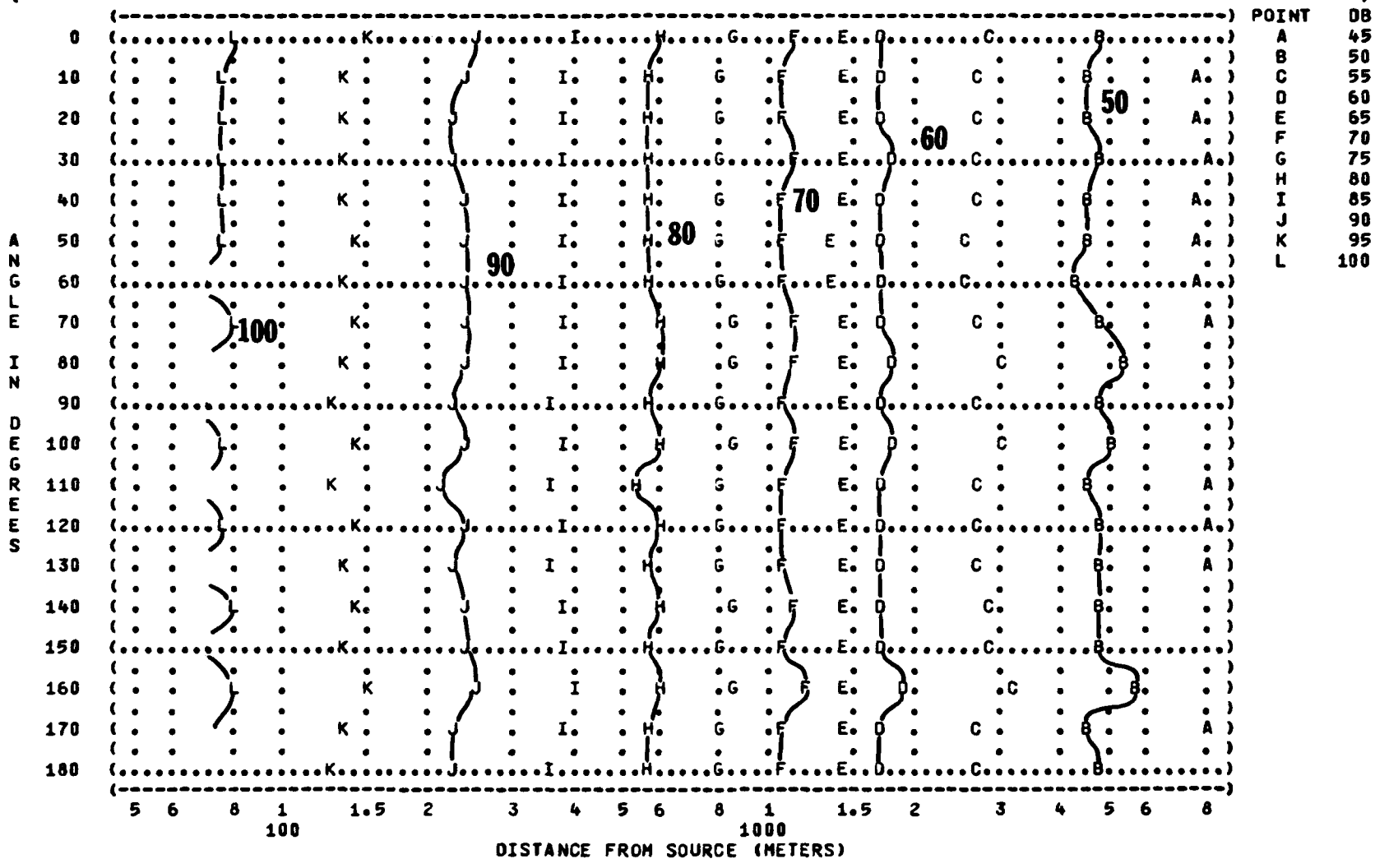
FIGURE: 4 OVERALL SOUND PRESSURE LEVEL (OASPL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05
14 SEP 78
PAGE 13

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95
L	100

FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 14

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80

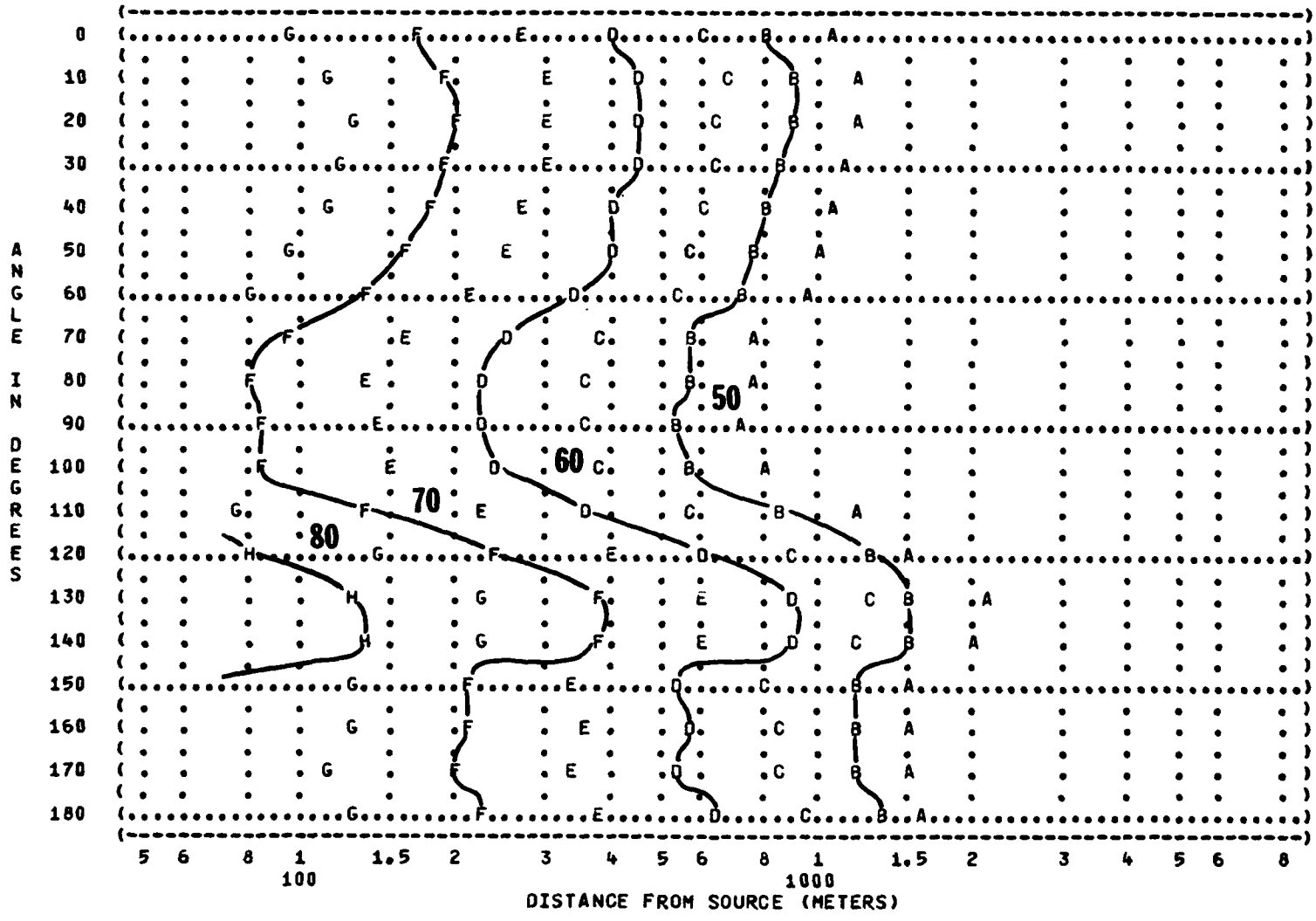


FIGURE 5: C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 02
14 SEP 78
PAGE 14

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80

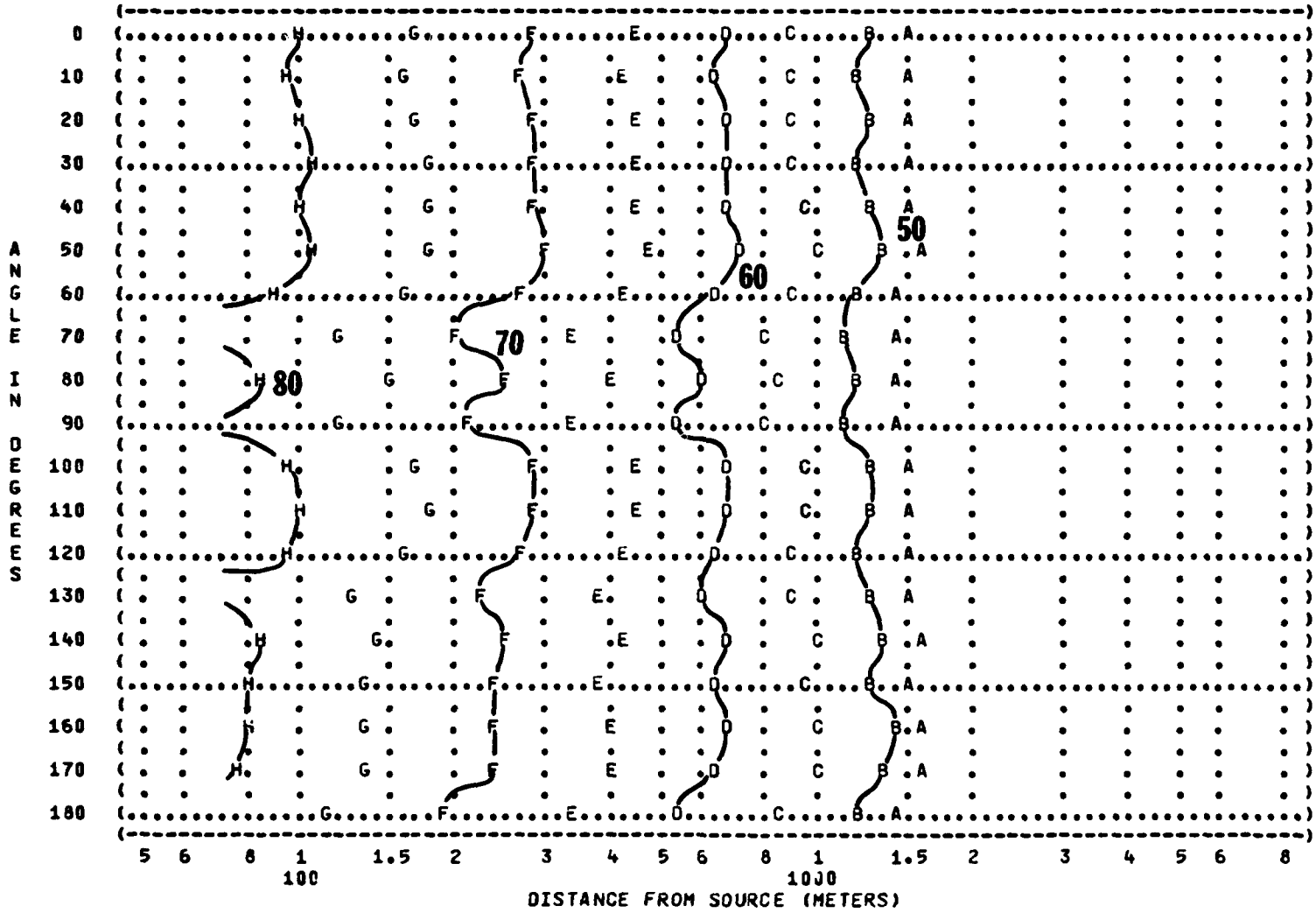


FIGURE: 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 14

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

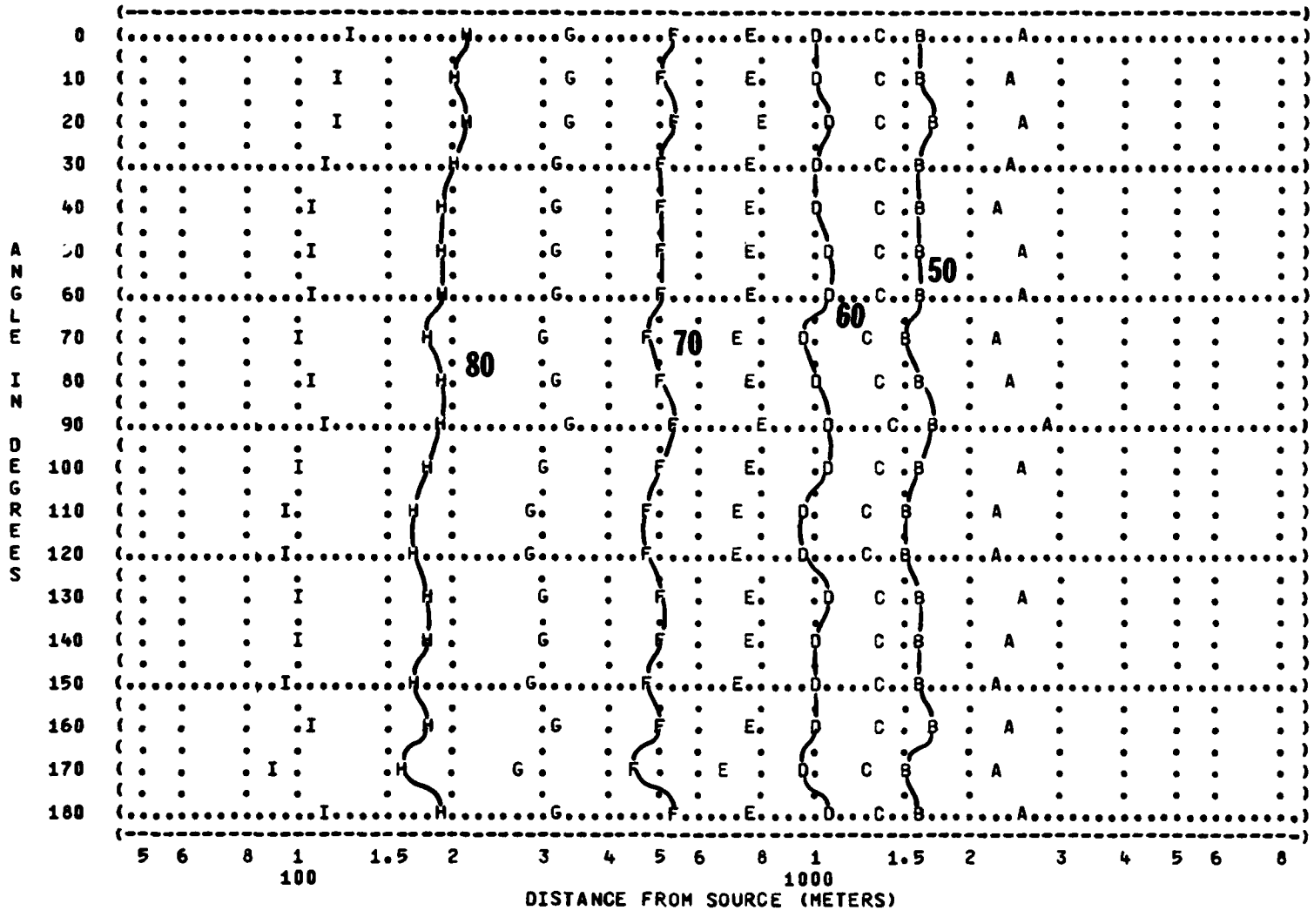


FIGURE: C-WEIGHTED OVERALL SOUND LEVEL (OASLC)
EQUAL LEVEL CONTOURS (DBC)

5 -

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

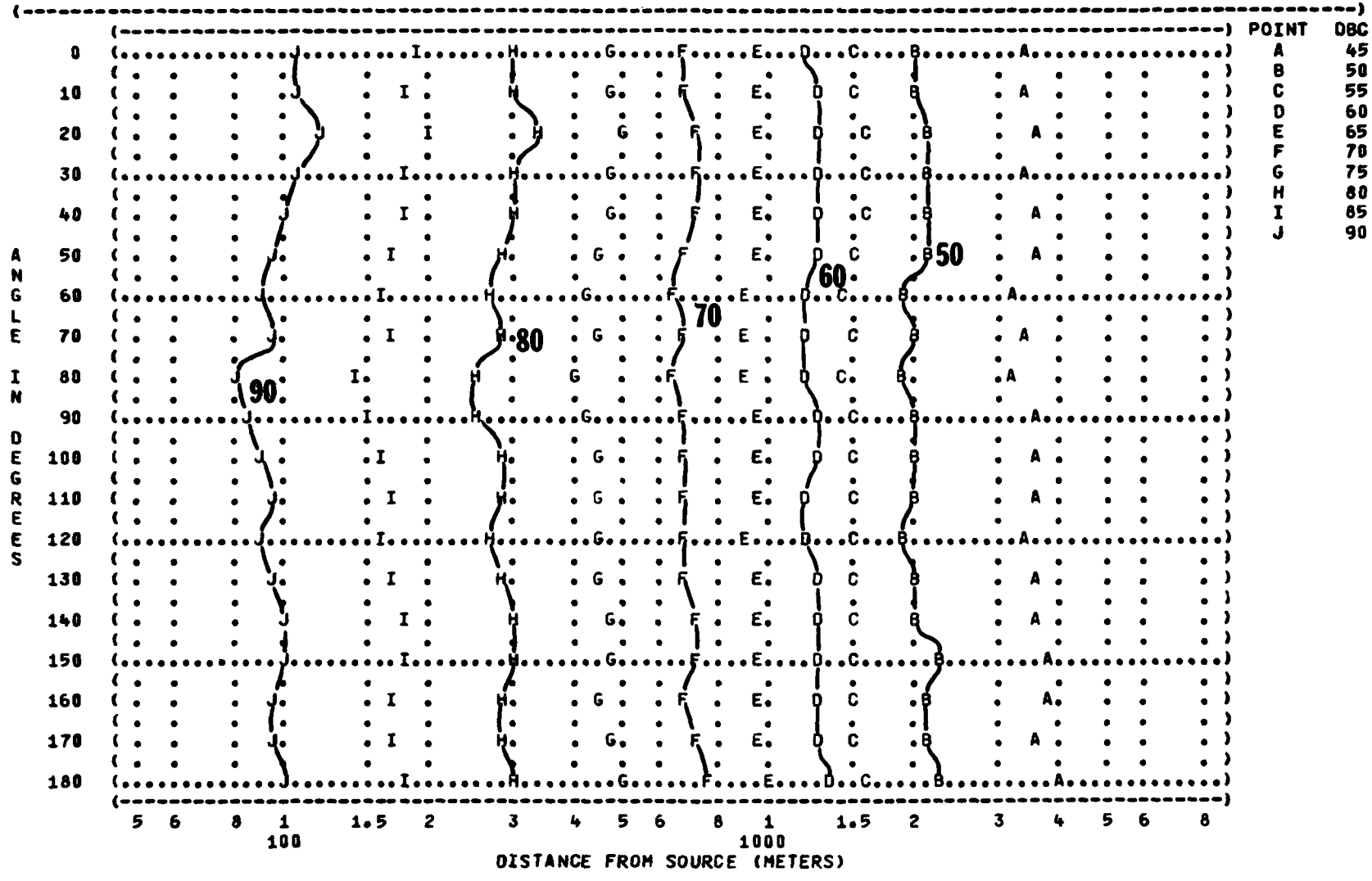
OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04

14 SEP 78

PAGE 14



POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90

FIGURE 5 C-WEIGHTED OVERALL SOUND LEVEL (OASLC) EQUAL LEVEL CONTOURS (DBC)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05
14 SEP 78
PAGE 14

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBC
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90
K	95

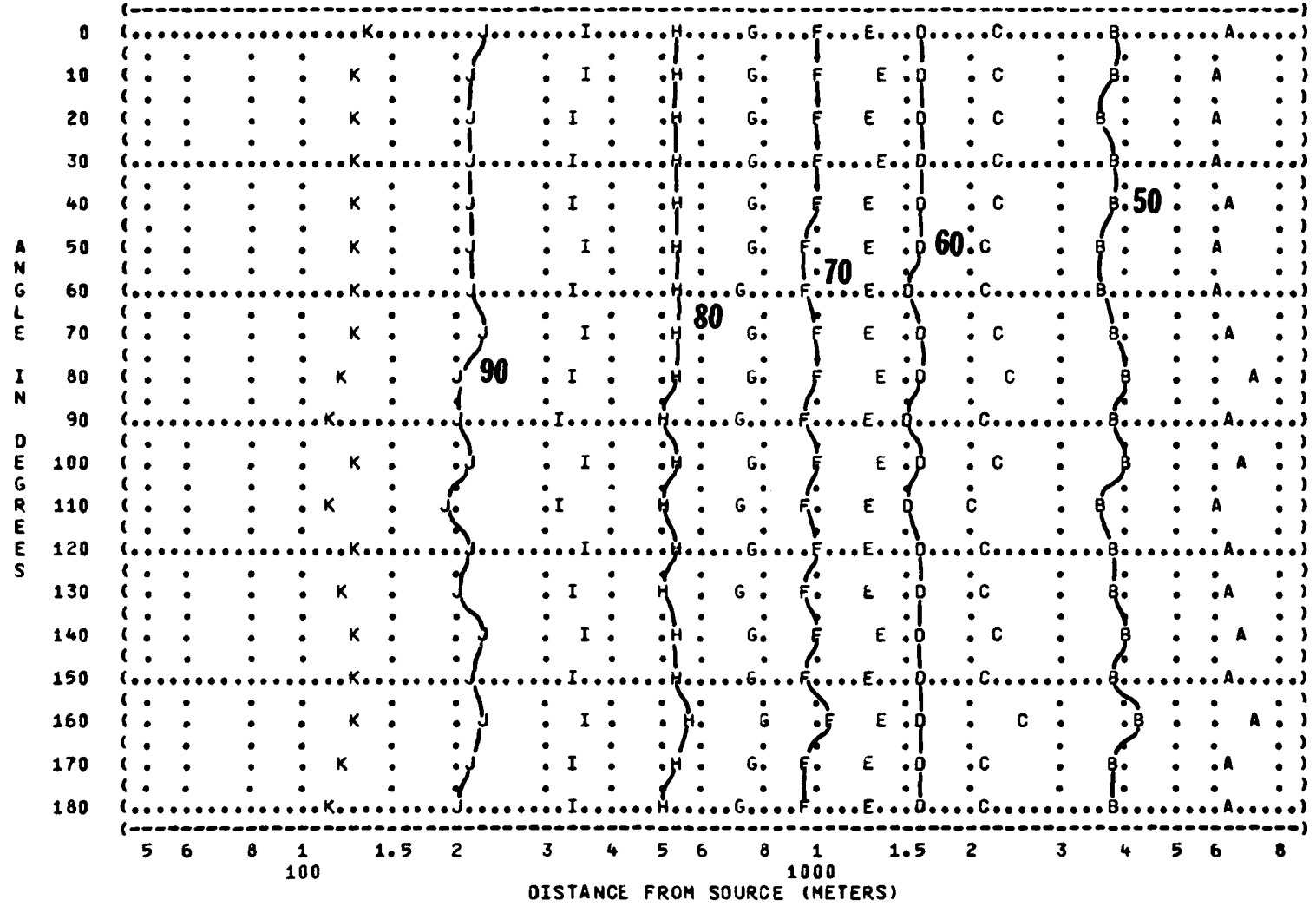


FIGURE 6: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 15

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75

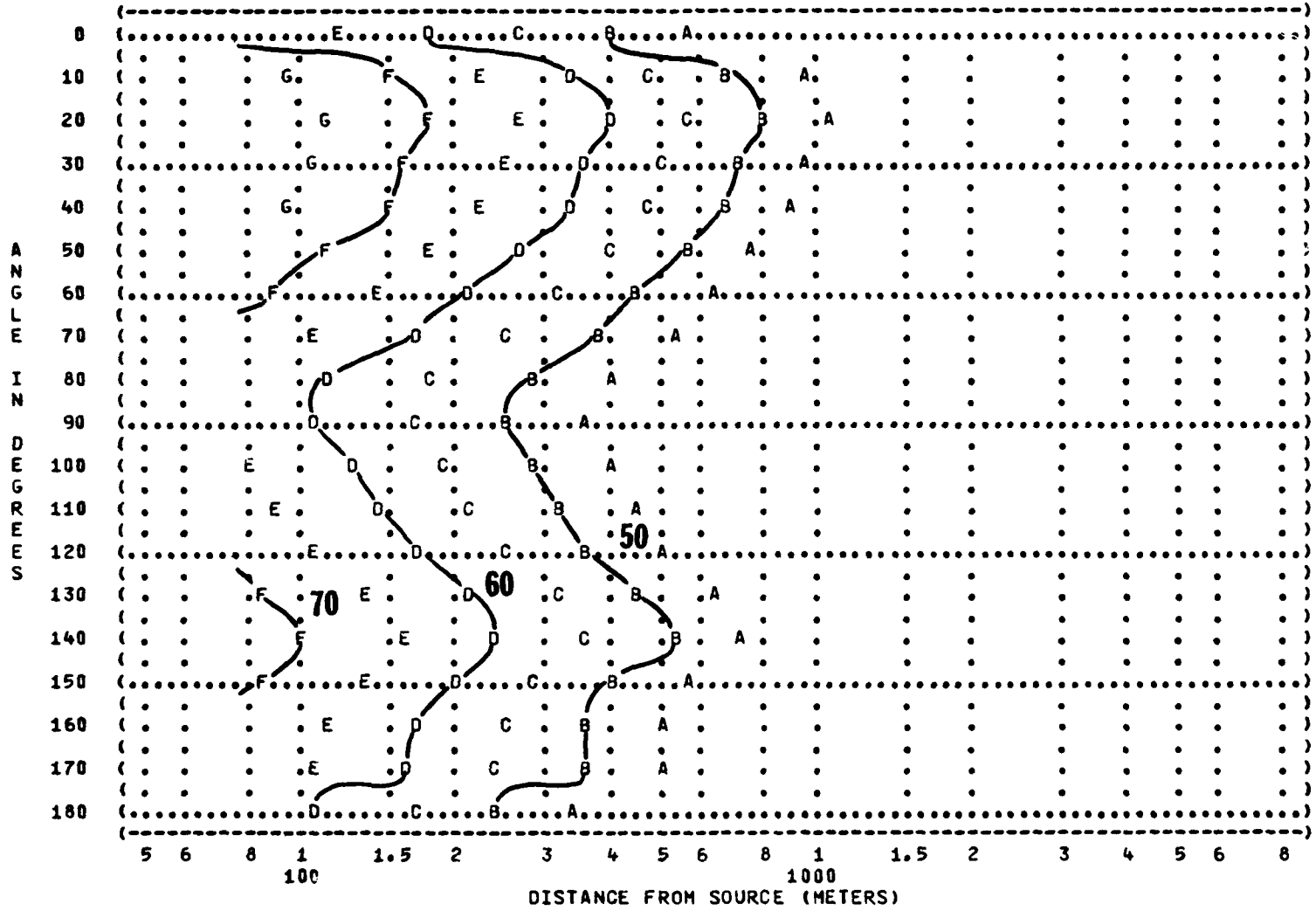


FIGURE 6: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-401
RUN 02
14 SEP 78
PAGE 15

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75

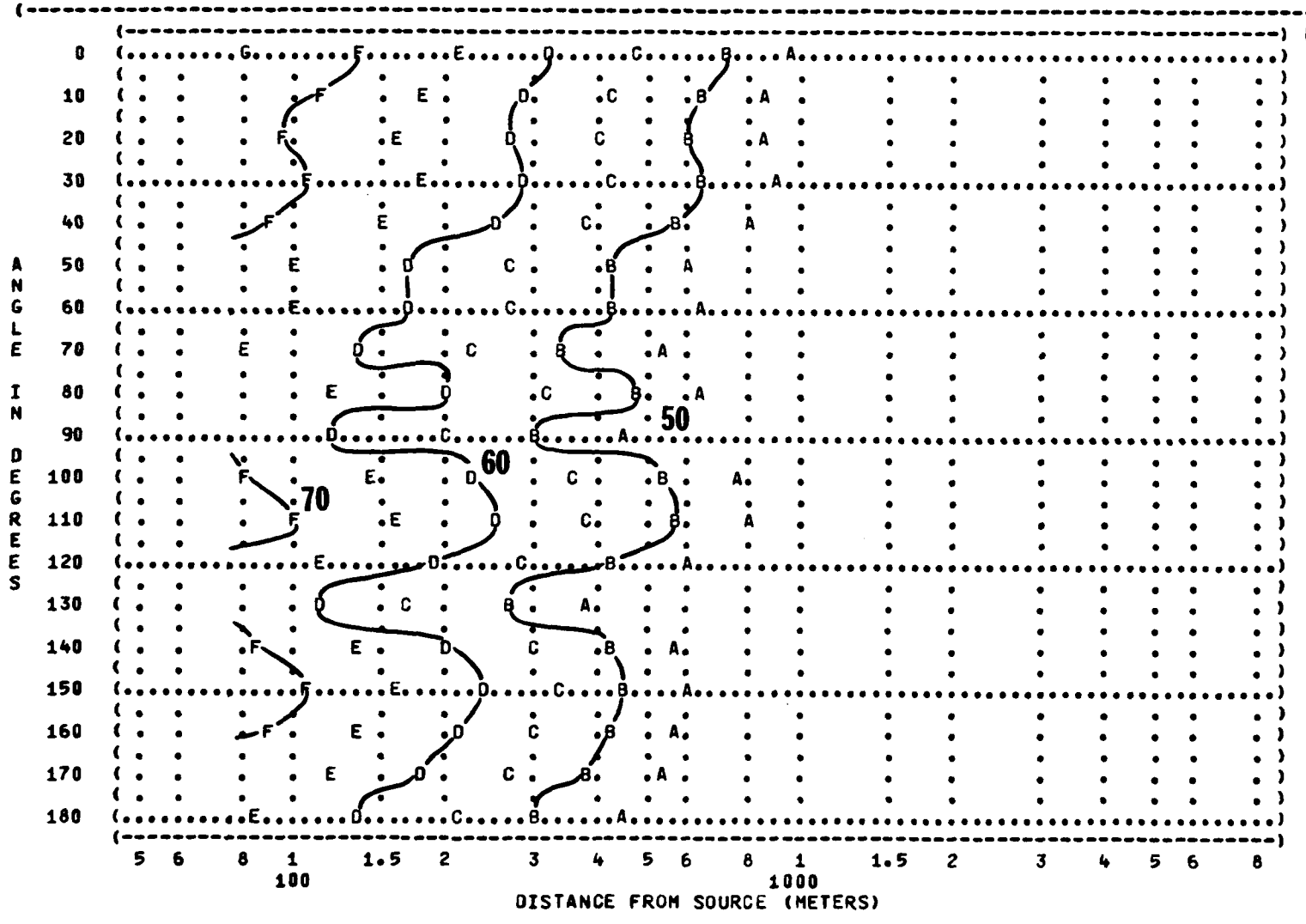


FIGURE 6: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 15

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75

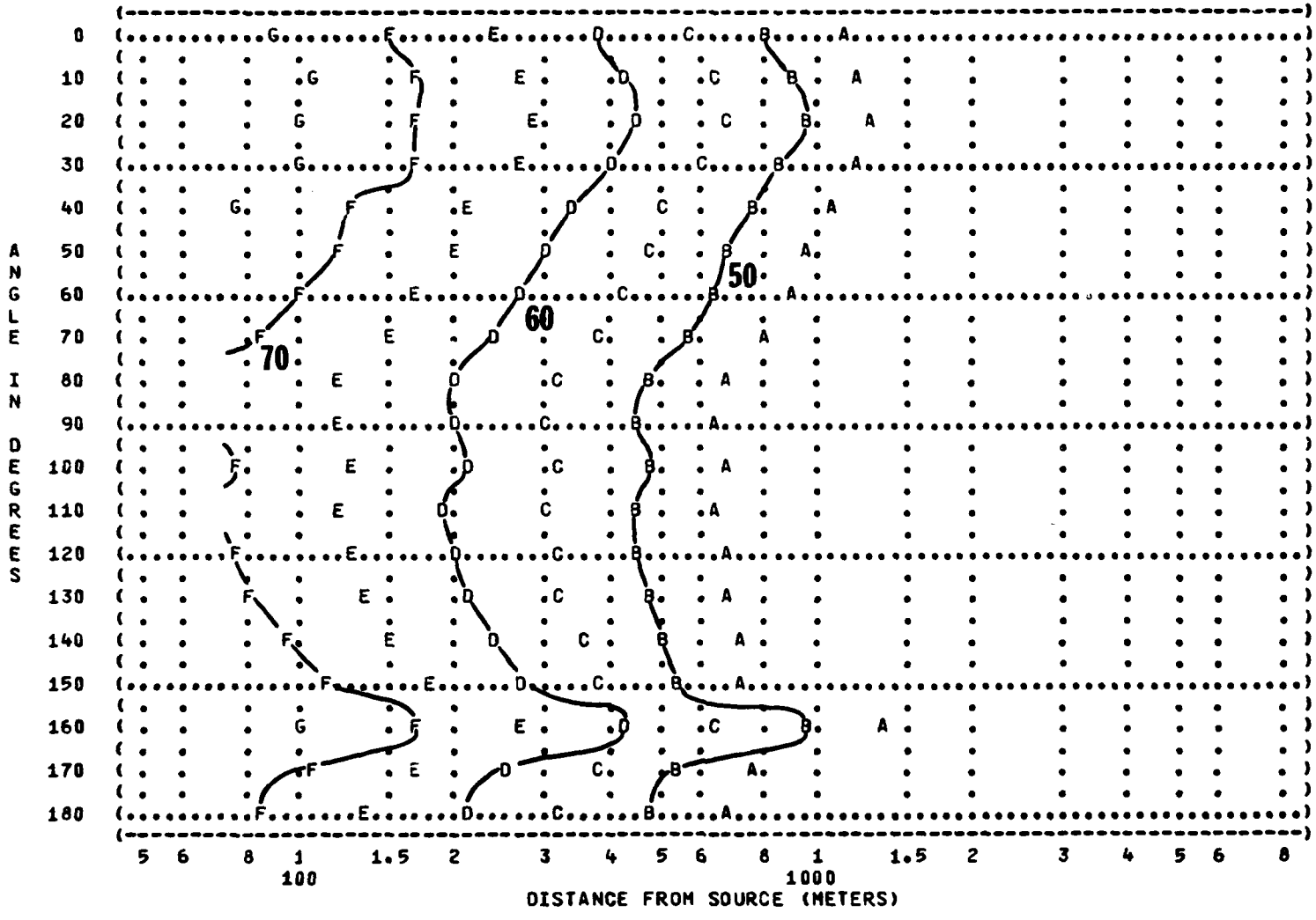


FIGURE 6: A-WEIGHTED OVERALL SOUND LEVEL (OASLA) EQUAL LEVEL CONTOURS (DBA)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 15

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85

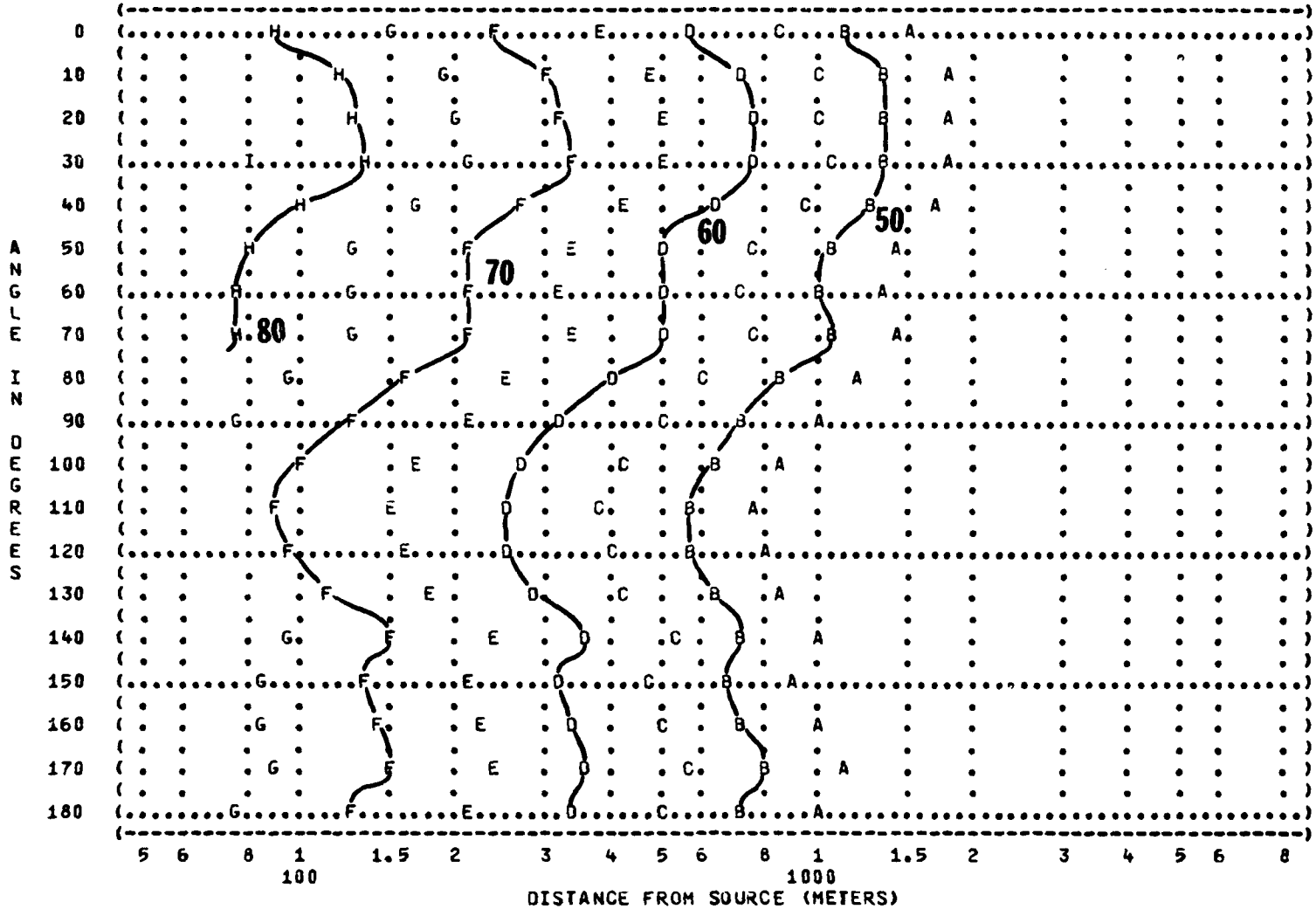


FIGURE: 6

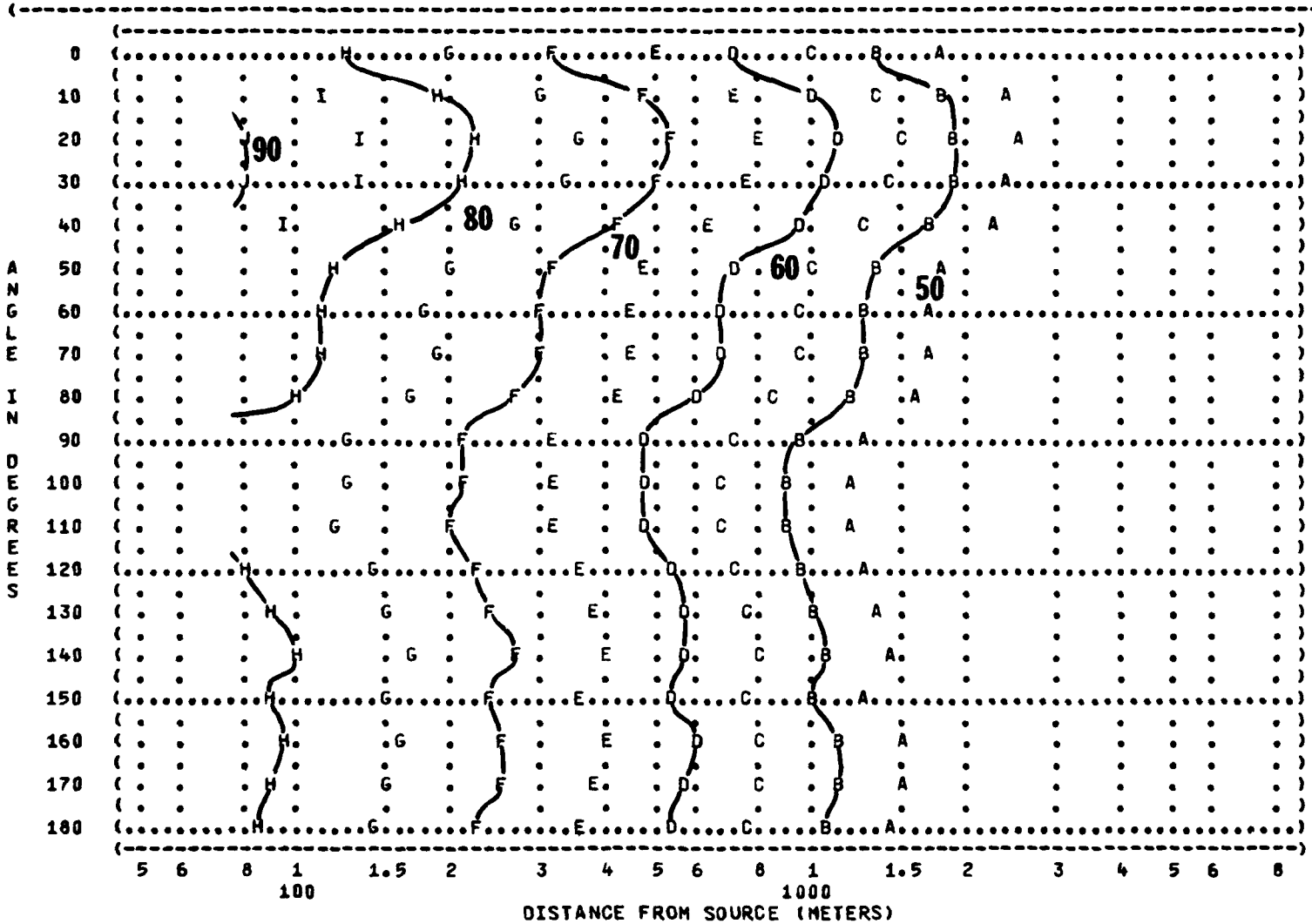
A-WEIGHTED OVERALL SOUND LEVEL (OASLA)
EQUAL LEVEL CONTOURS (DBA)

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05
14 SEP 78
PAGE 15



POINT	DBA
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90

FIGURE: 7 PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 16

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95

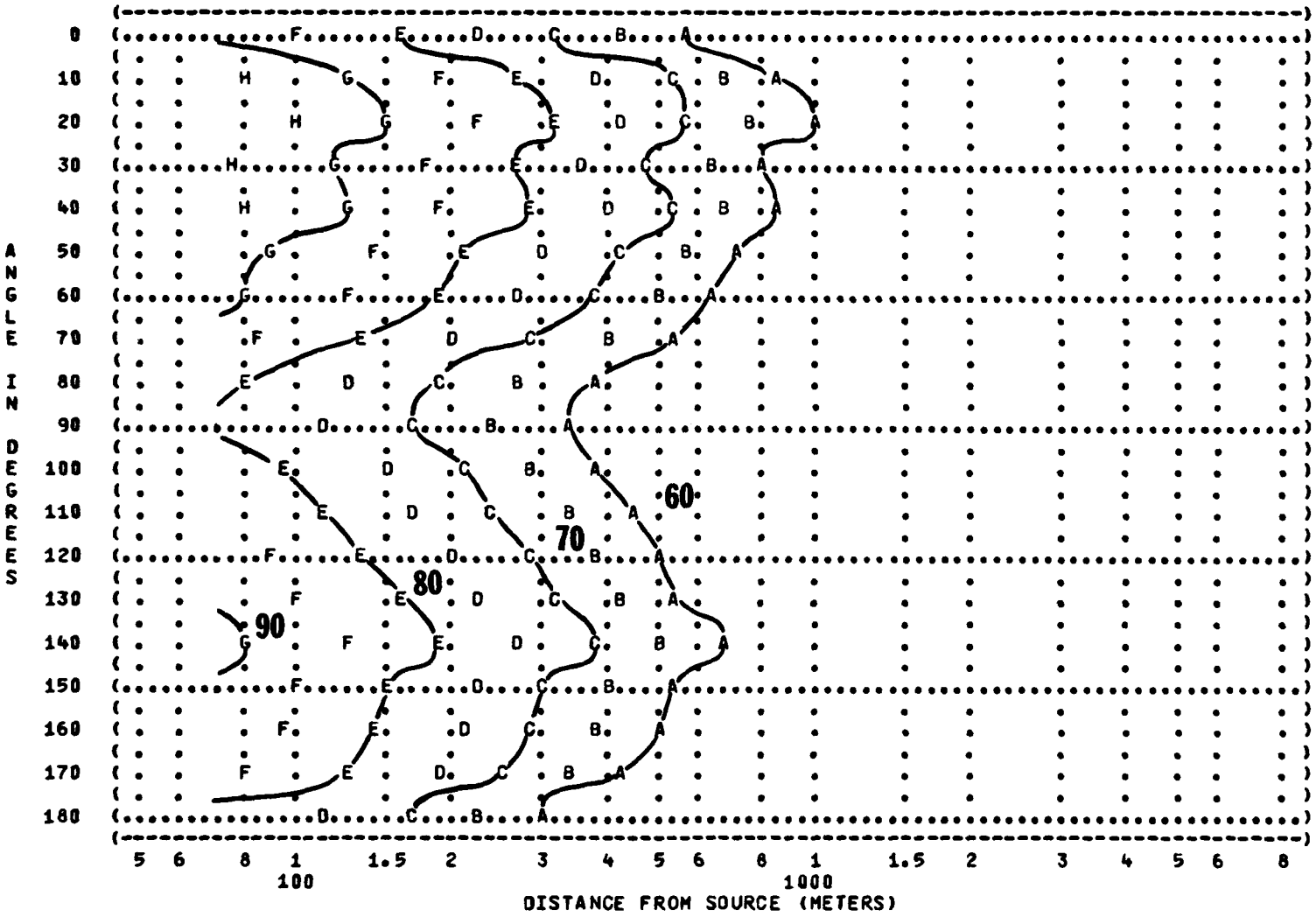


FIGURE 7: PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 02
14 SEP 78
PAGE 16

POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90

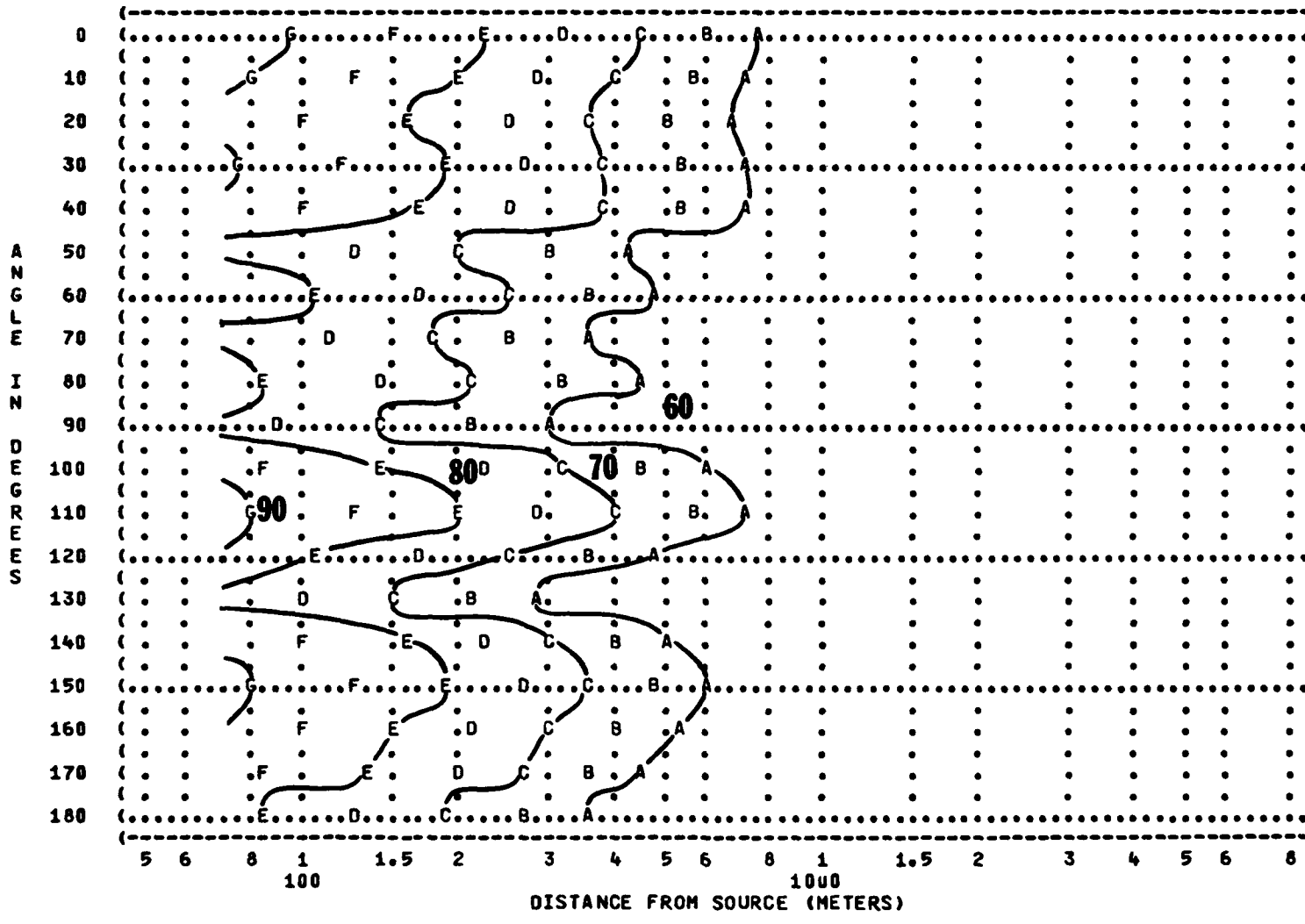


FIGURE 7 PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 16

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95

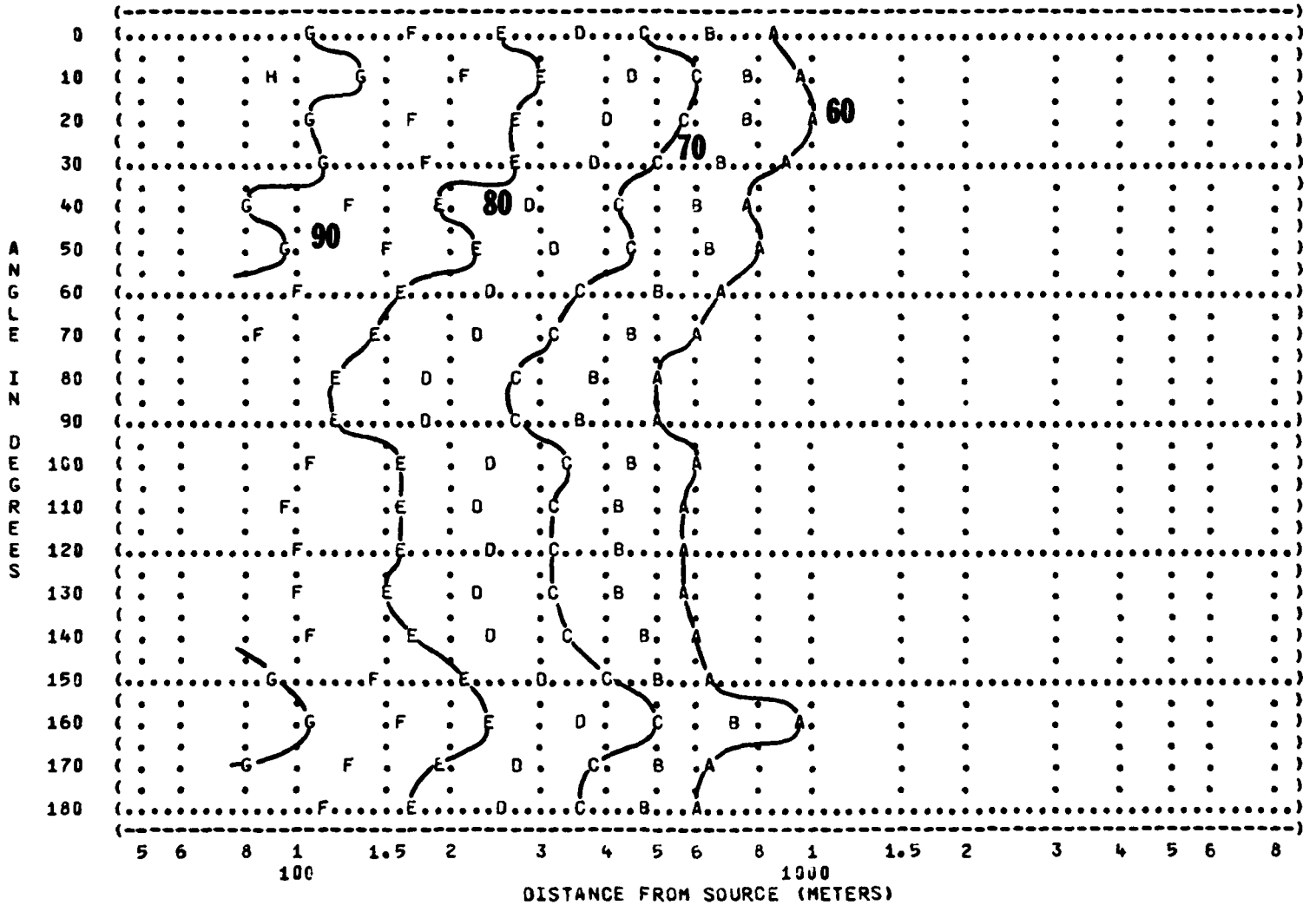


FIGURE 7 PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT) EQUAL LEVEL CONTOURS (PNDB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 16

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100

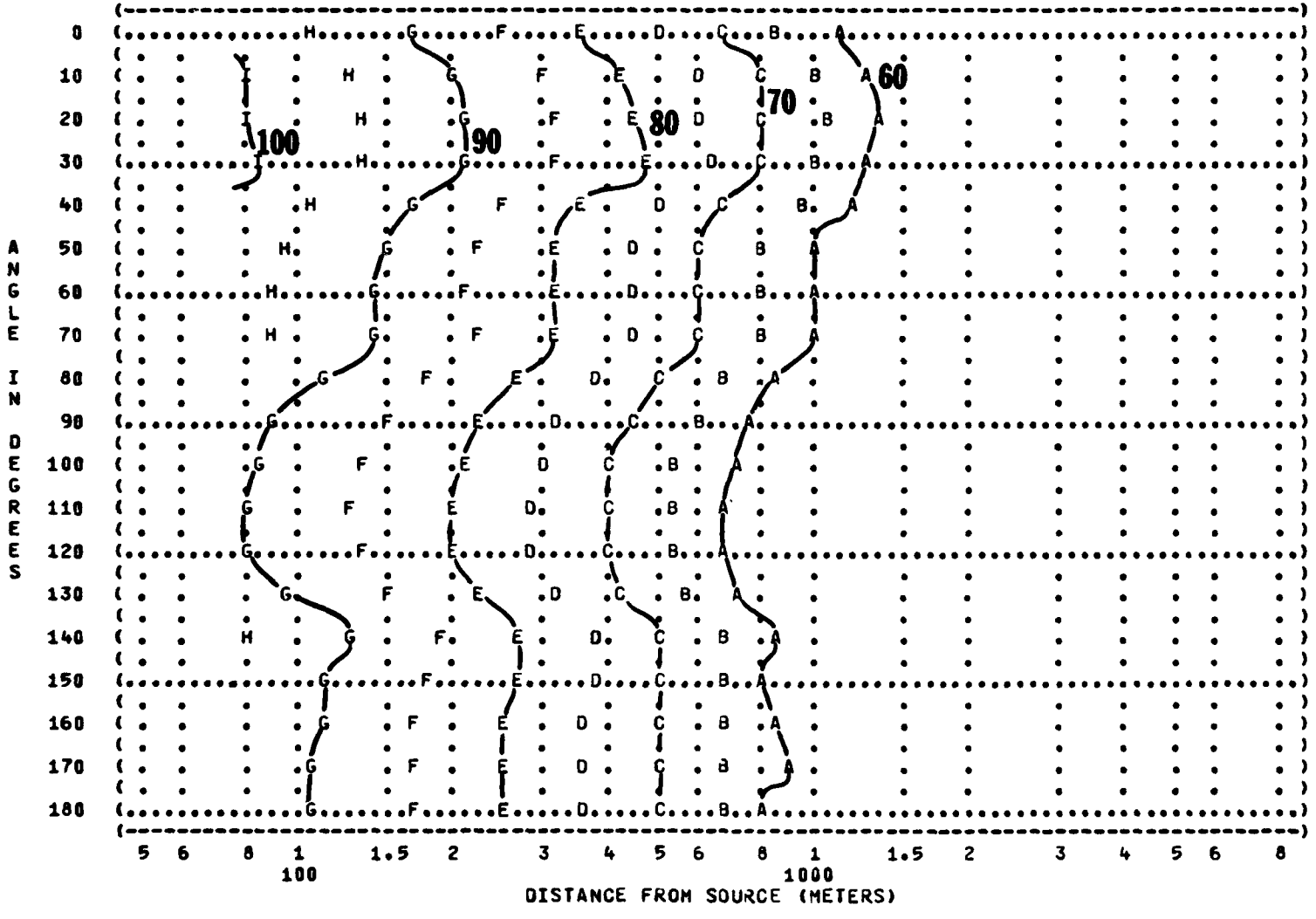


FIGURE 7: PERCEIVED NOISE LEVEL, TONE CORRECTED (PNLT)
EQUAL LEVEL CONTOURS (PNDB)

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05
14 SEP 78
PAGE 16

POINT	PNDB
A	60
B	65
C	70
D	75
E	80
F	85
G	90
H	95
I	100
J	105

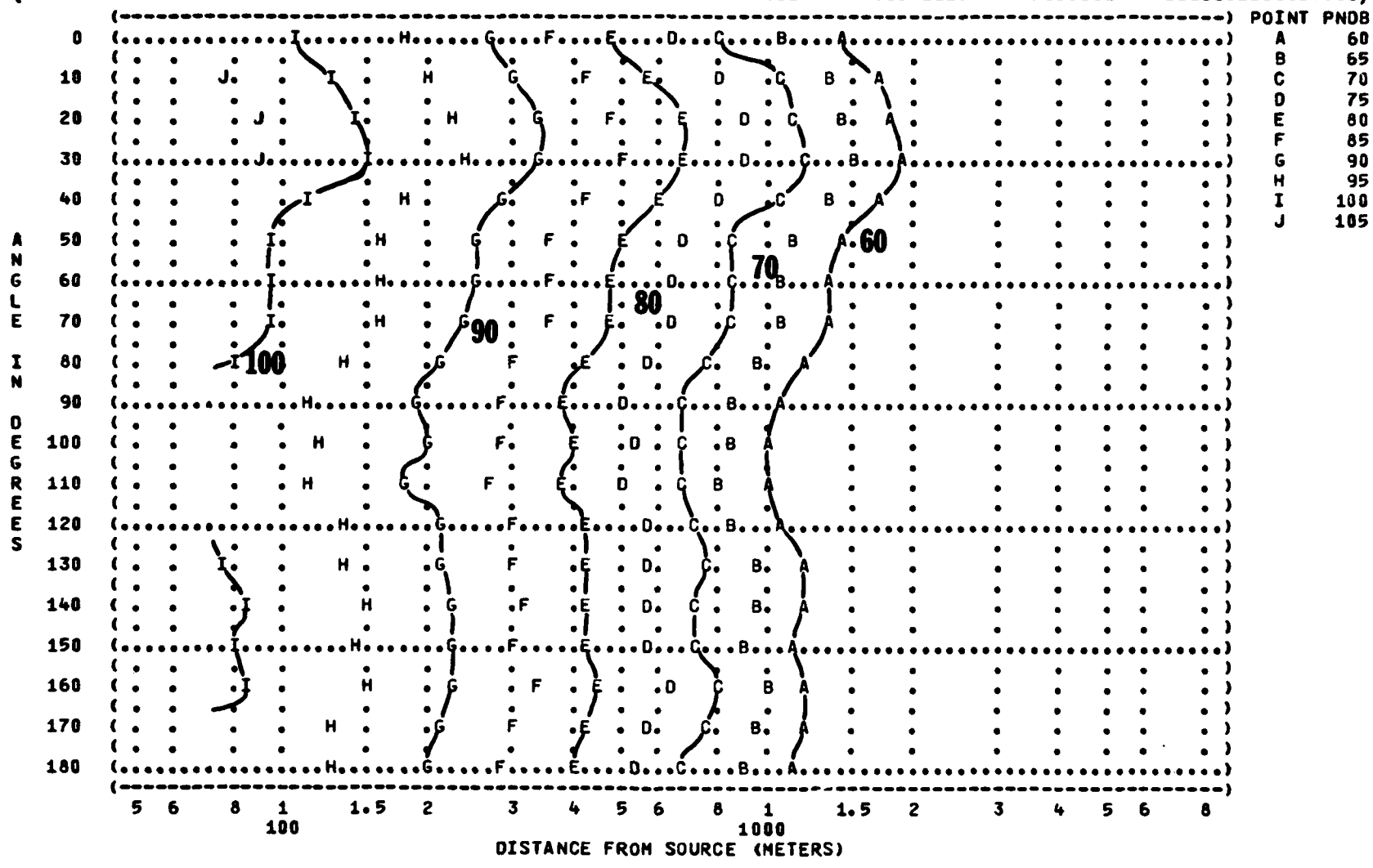


FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 17

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

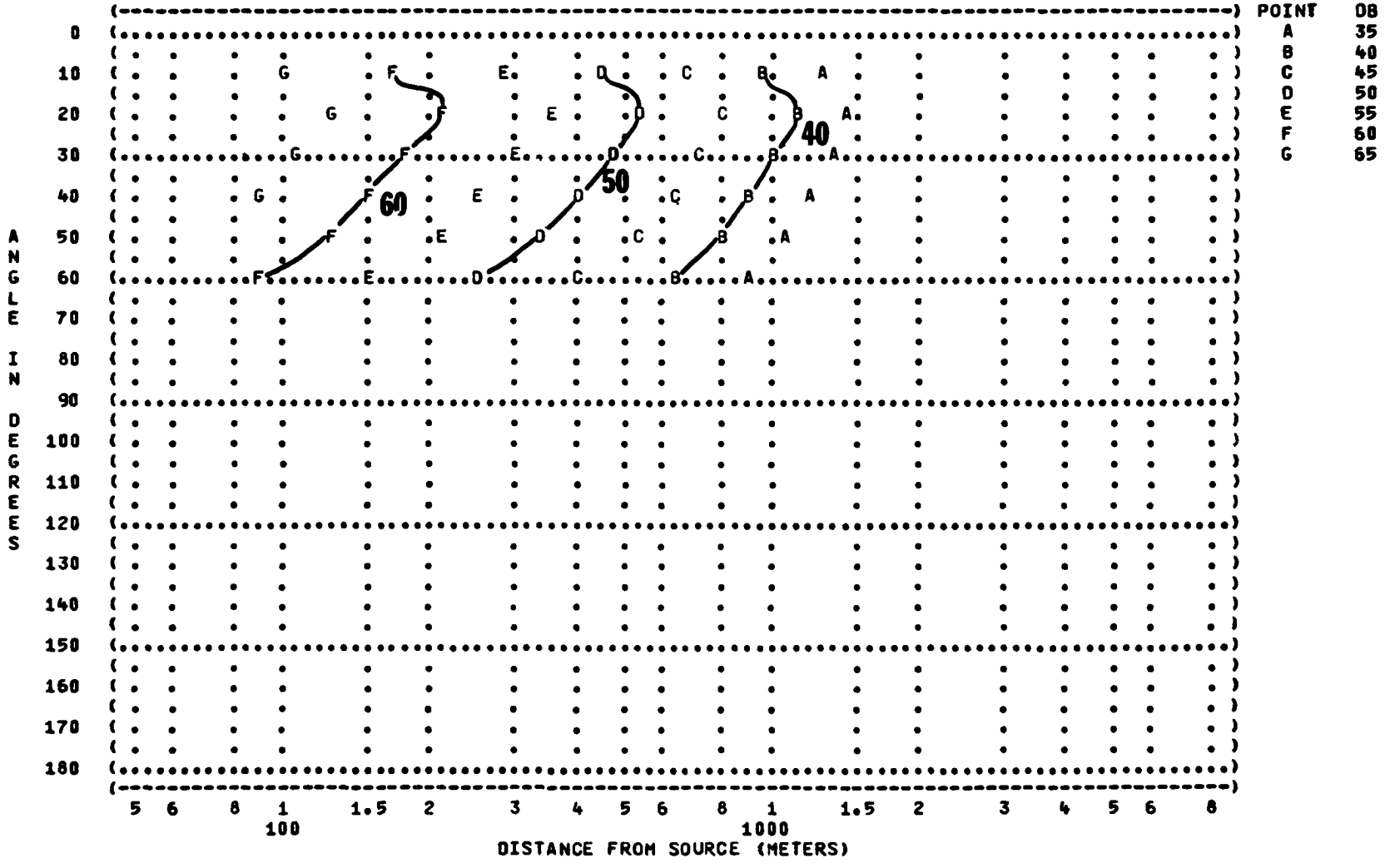


FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 02
14 SEP 78
PAGE 17

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

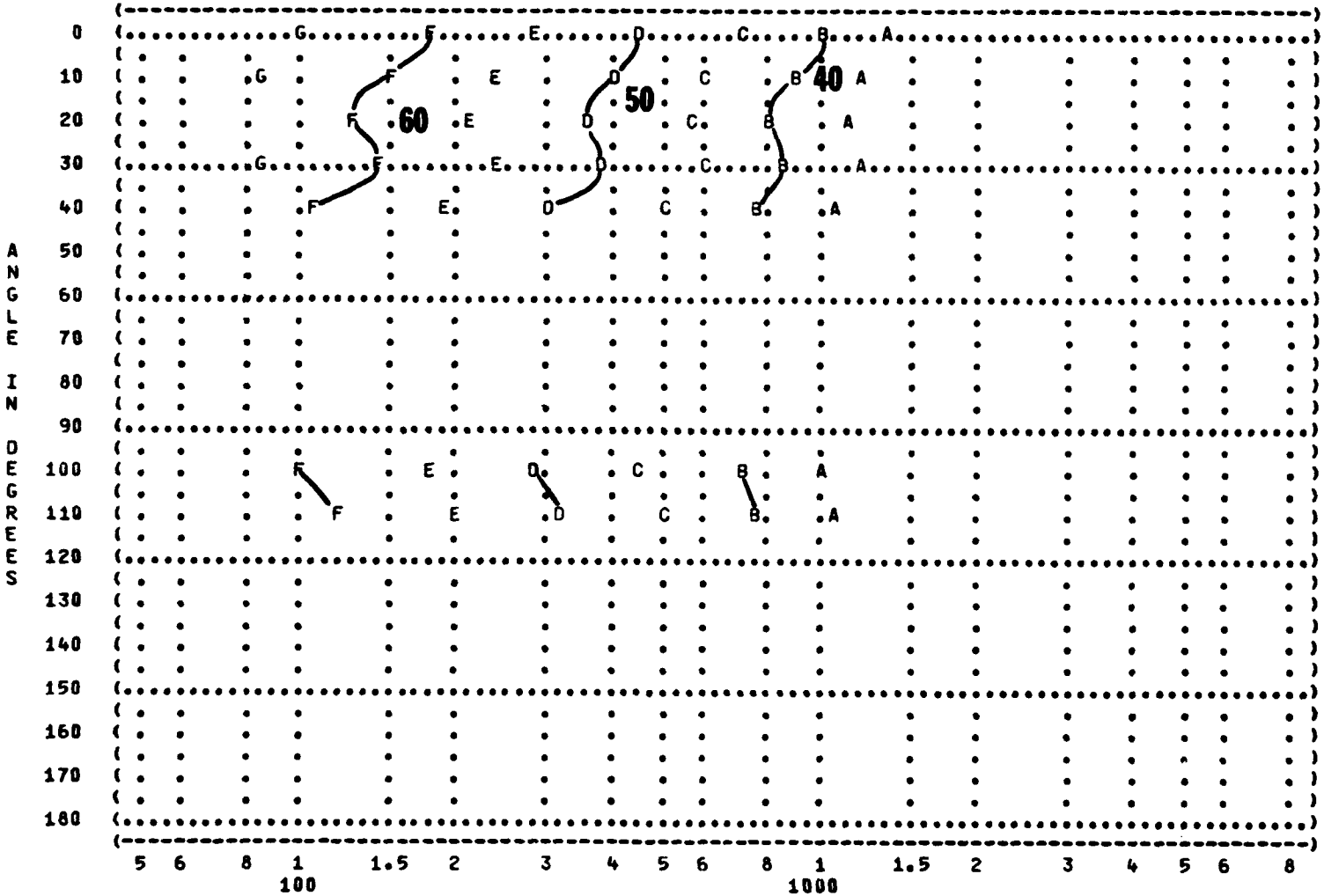


FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL) EQUAL LEVEL CONTOURS (DB)

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 17

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

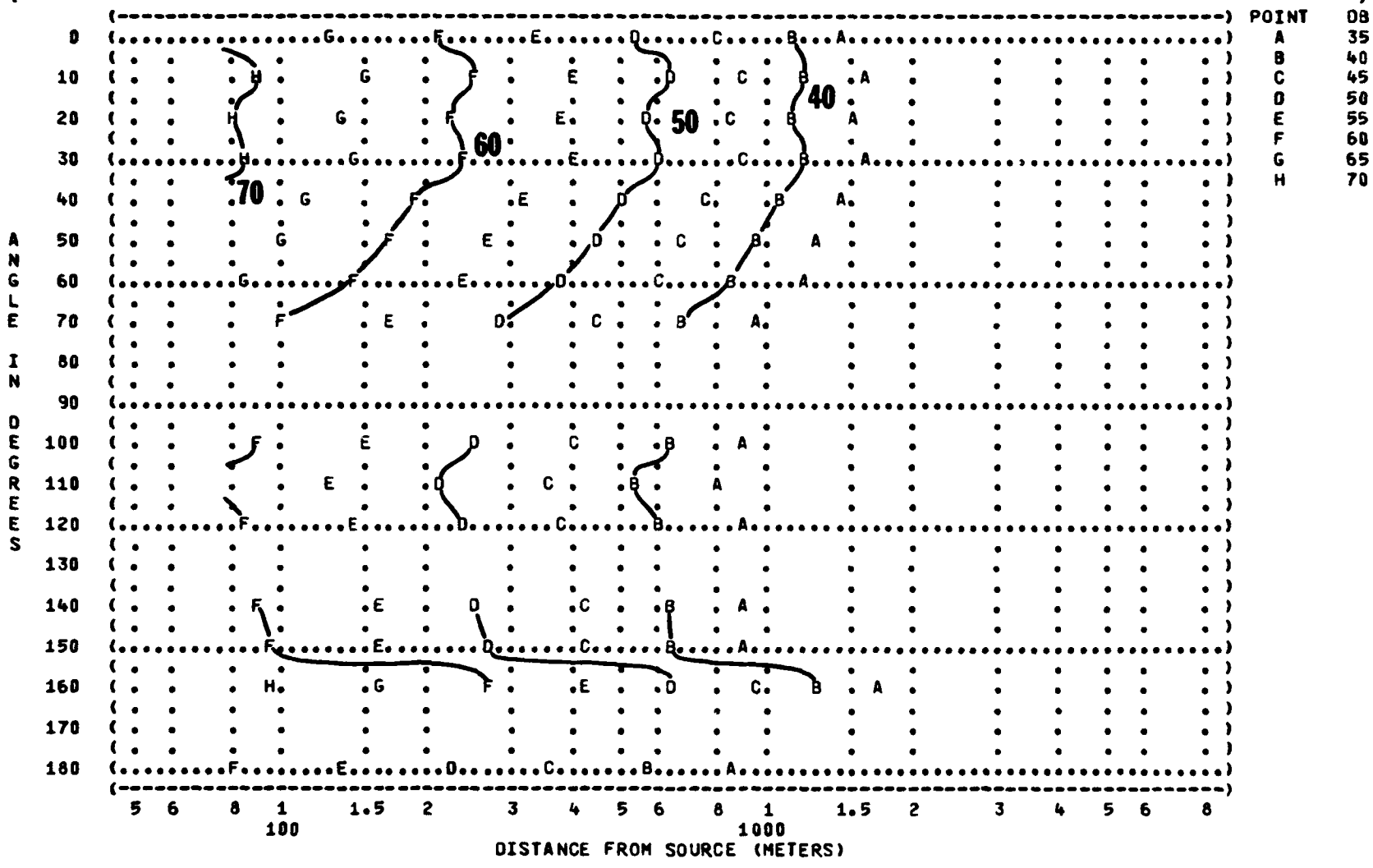


FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)
EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 17

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

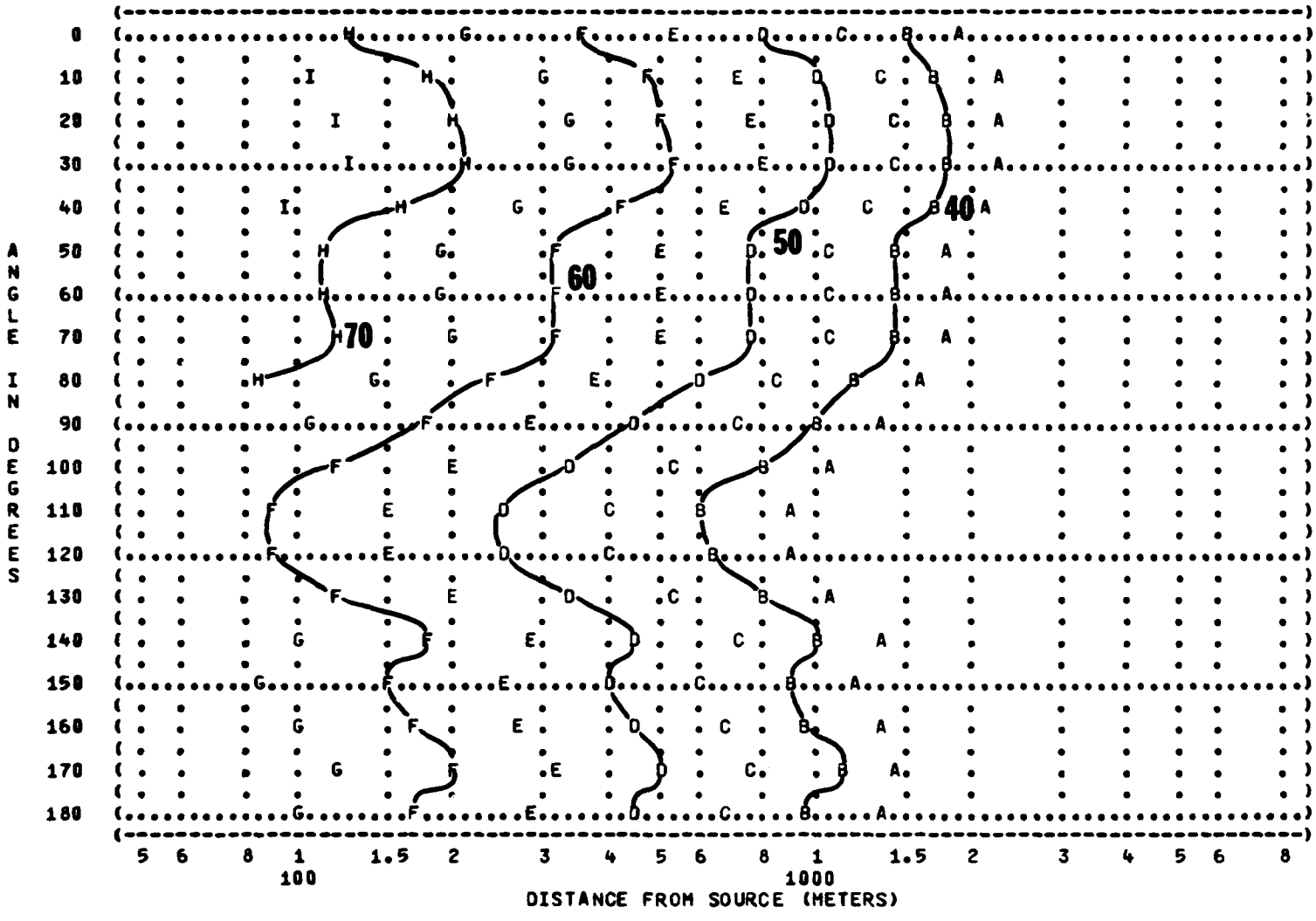


FIGURE 8: PREFERRED SPEECH INTERFERENCE LEVEL (PSIL)
EQUAL LEVEL CONTOURS (DB)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05
14 SEP 78
PAGE 17

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

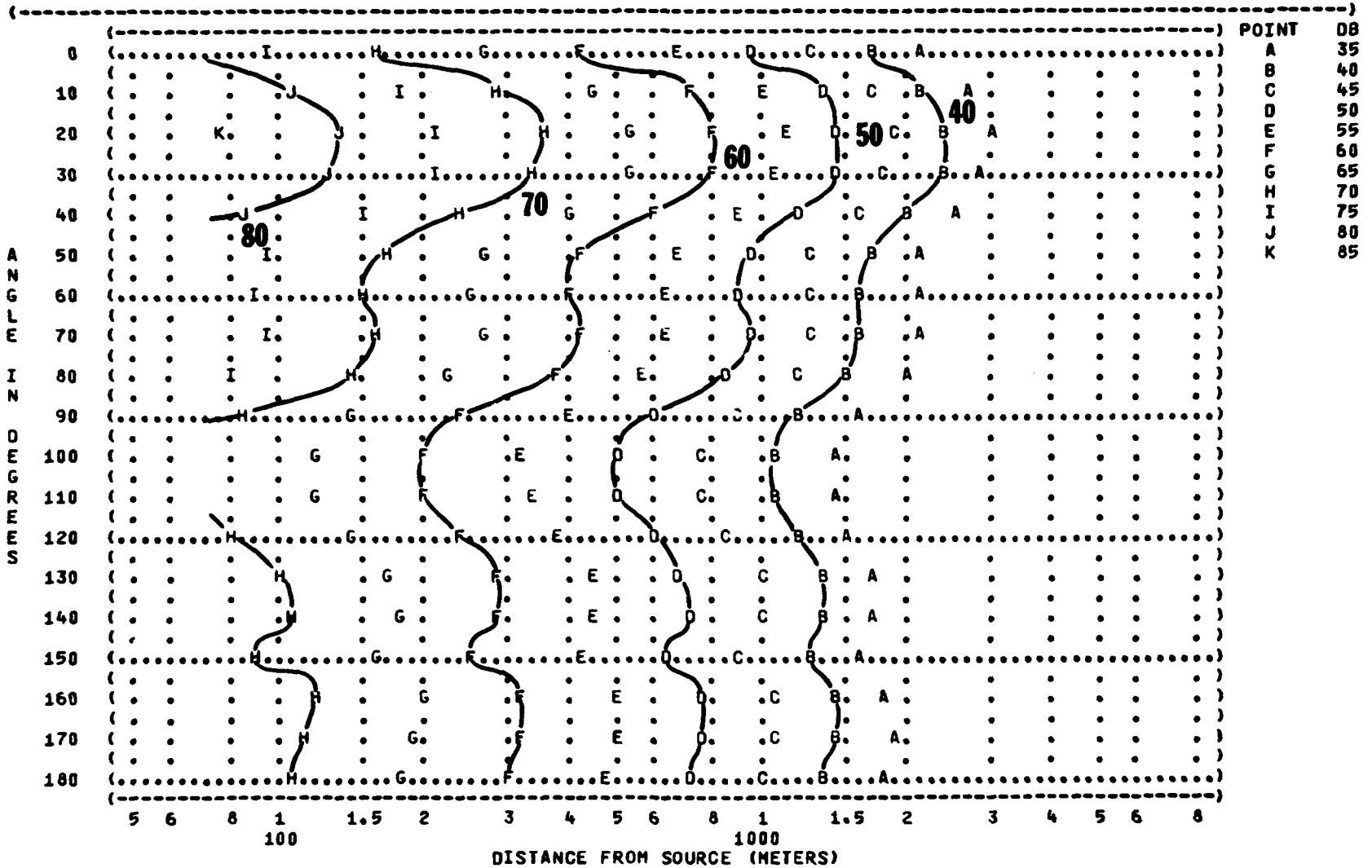


FIGURE: 9 MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 7

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

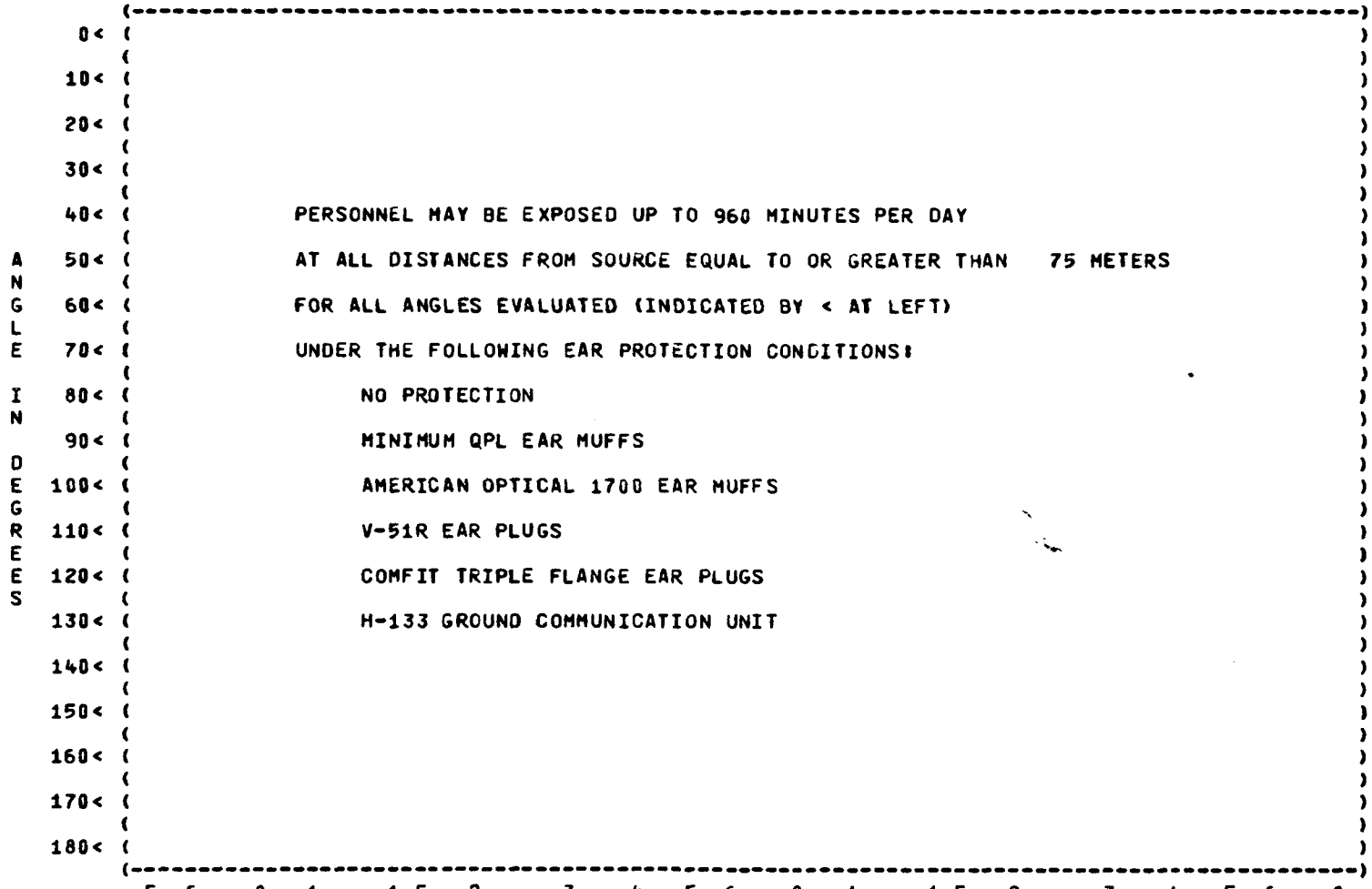


FIGURE: 9	MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73) EQUAL TIME CONTOURS (MINUTES)		IDENTIFICATION:
NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE	OPERATION: 75% RPM ENGINE RUNUP SINGLE ENGINE GROUND RUNUP (SUPPRESSED)	METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %	OMEGA 1.4 TEST 77-733-001 RUN 02 14 SEP 78 PAGE 7

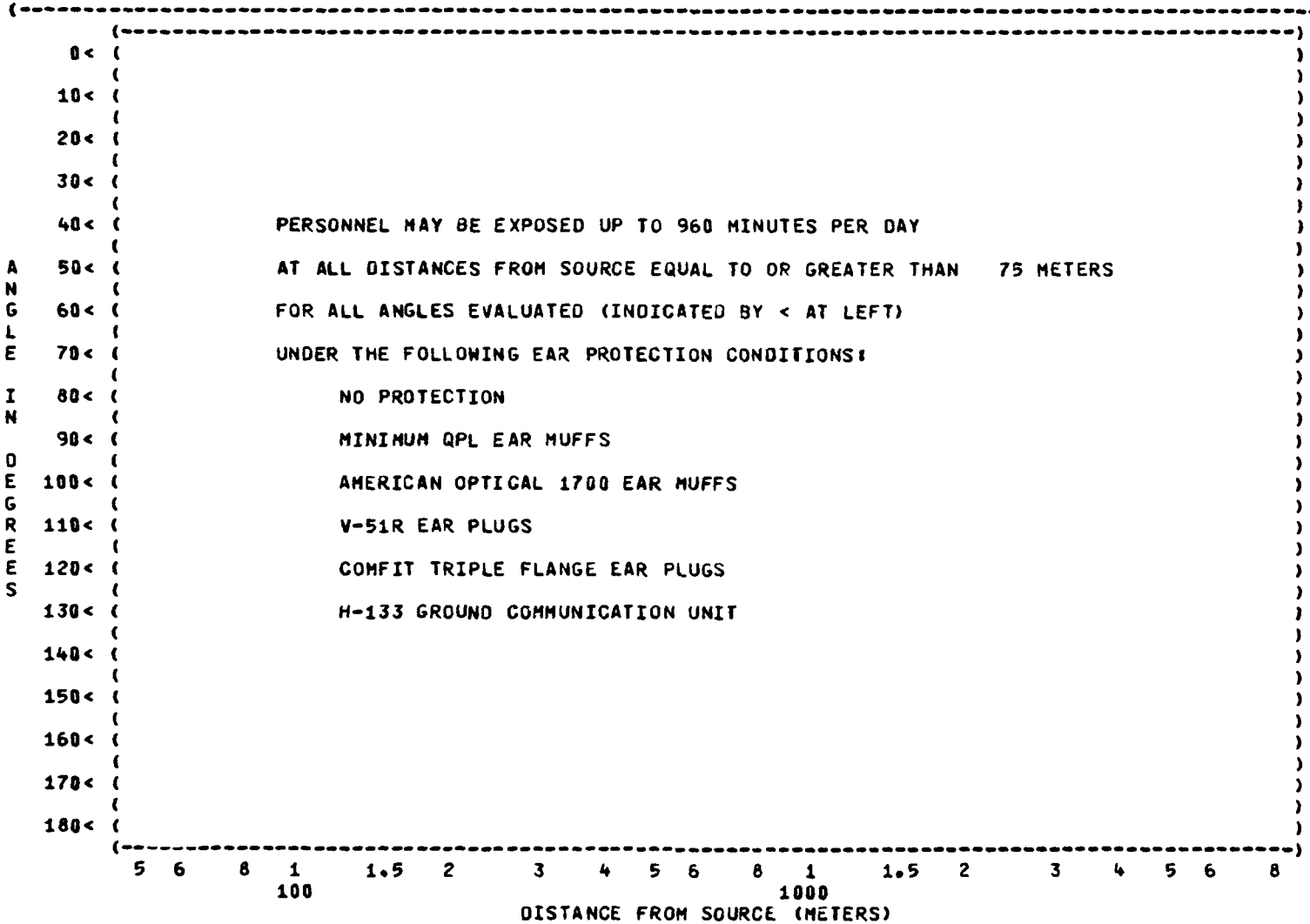


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 7

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

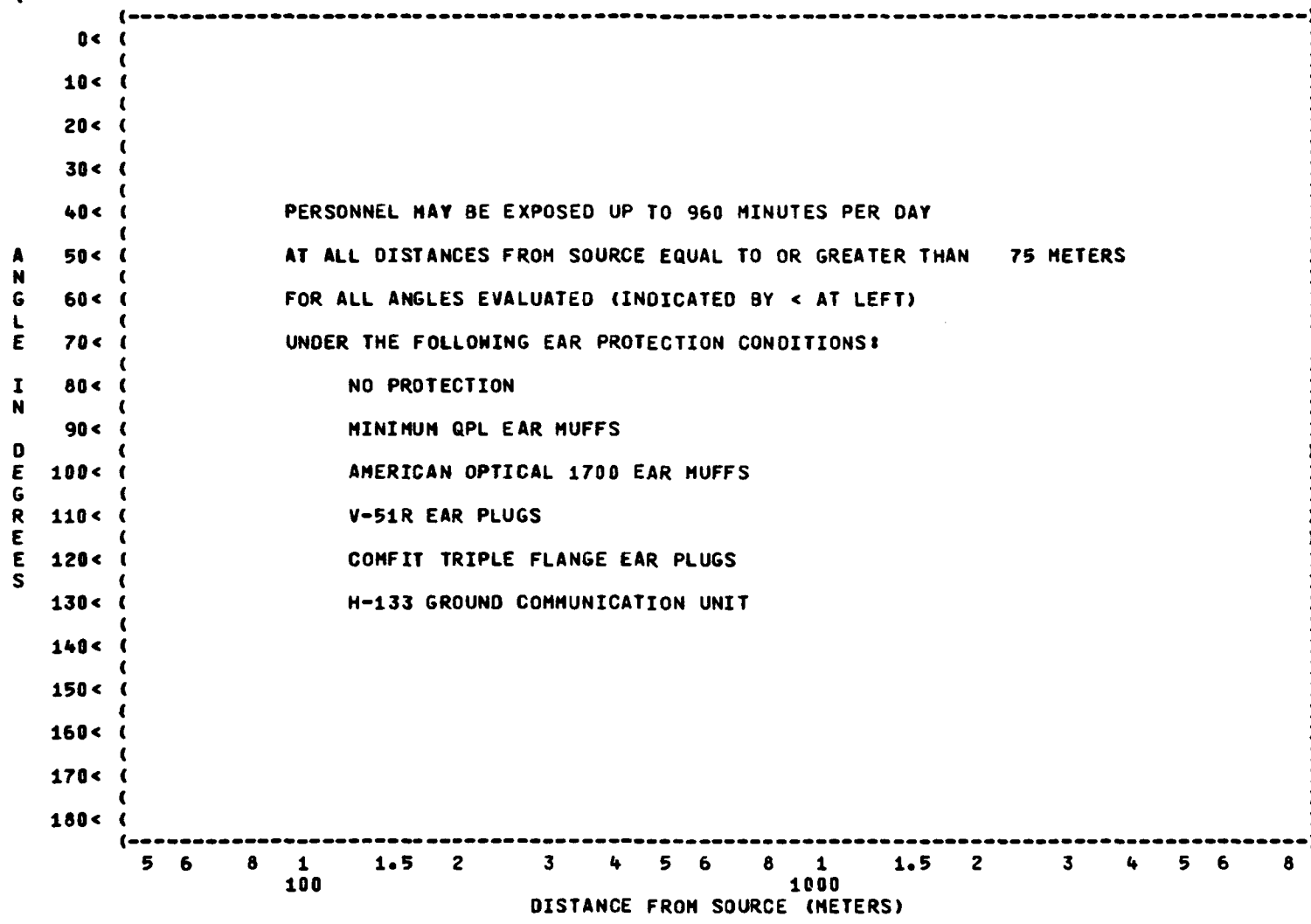


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04

14 SEP 78

PAGE 7

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	MIN
A	960
B	480

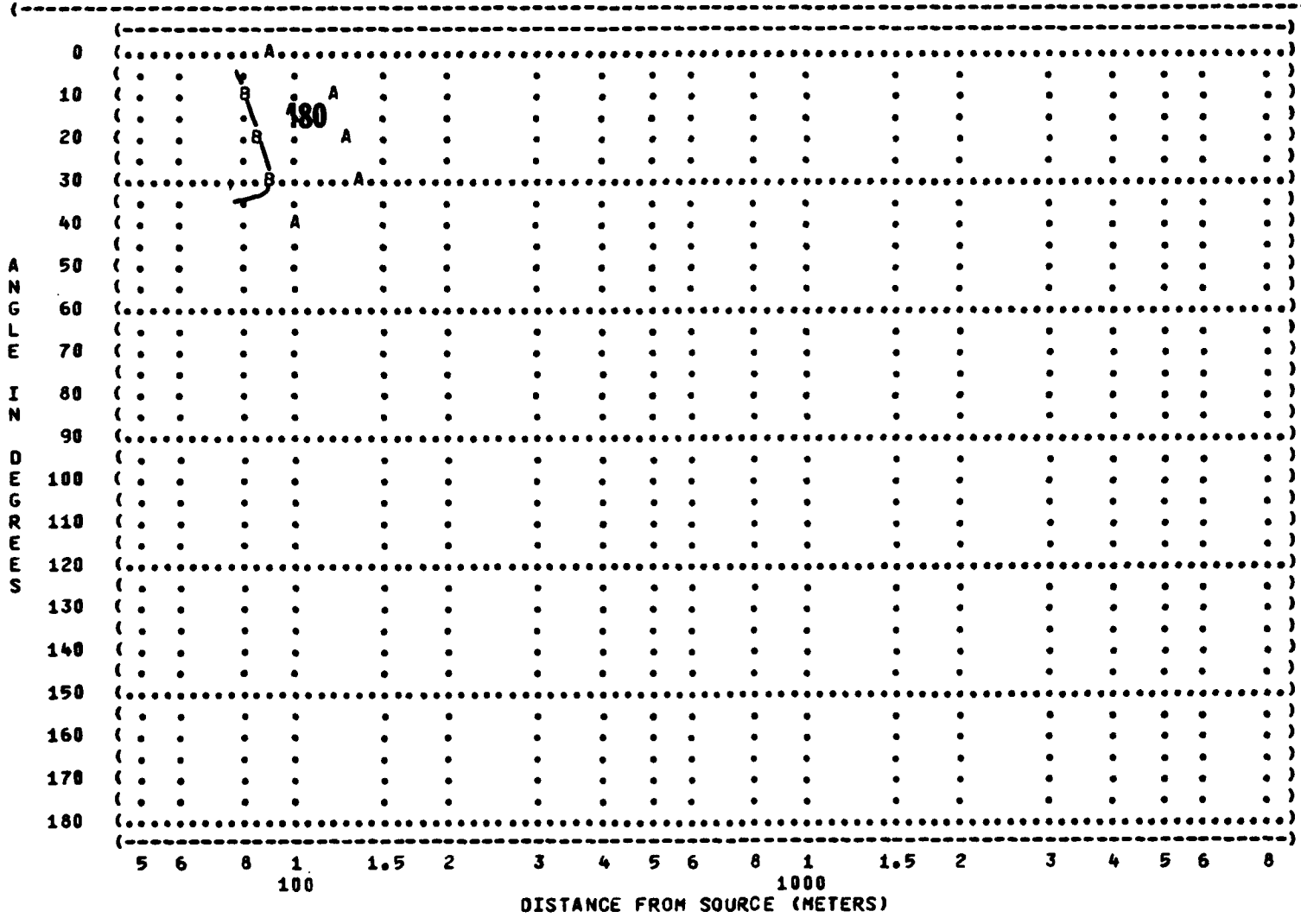


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 8

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

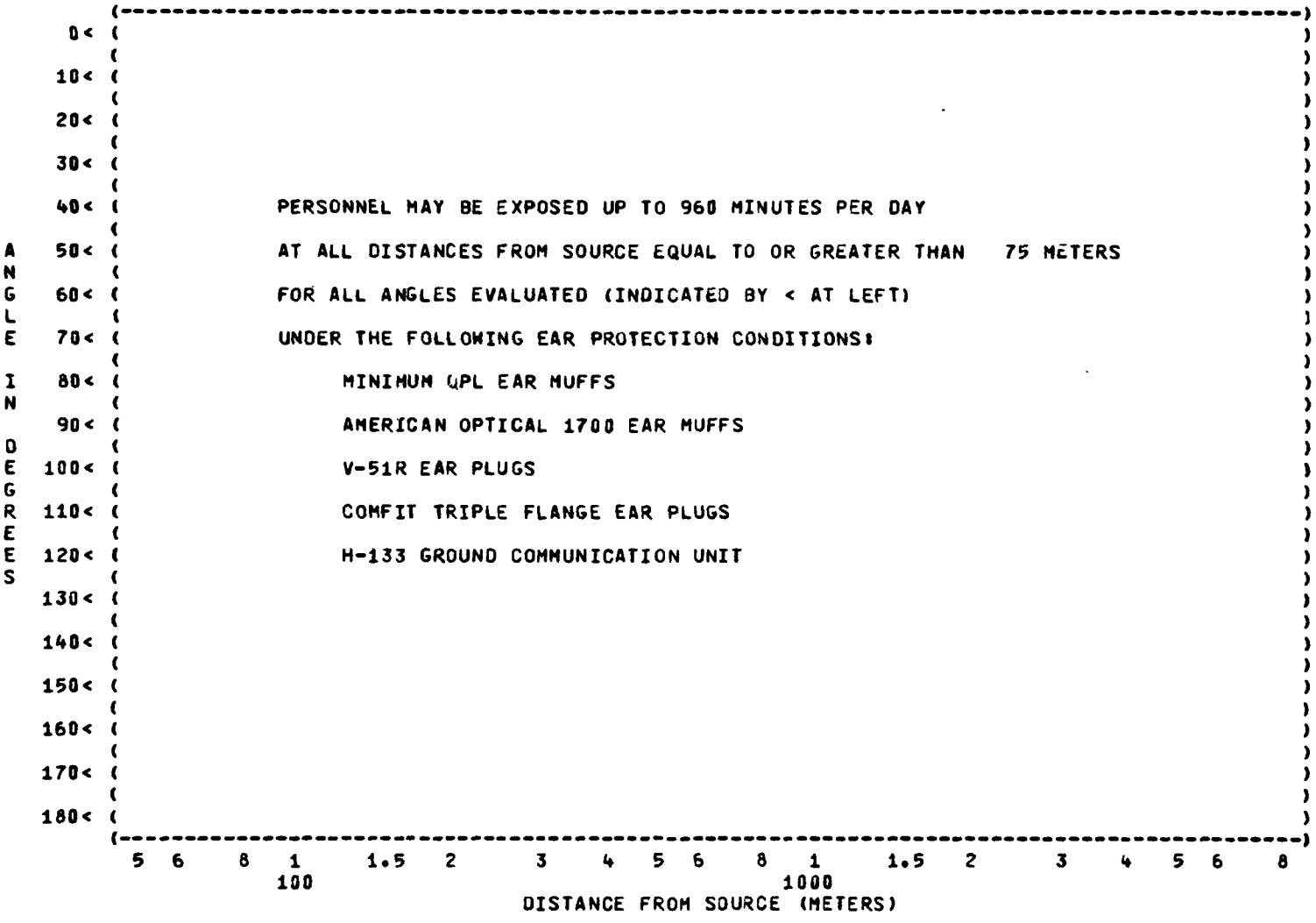


FIGURE 9: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)
NO PROTECTION

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05
14 SEP 78
PAGE 7

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	MIN
A	960
B	480
C	240

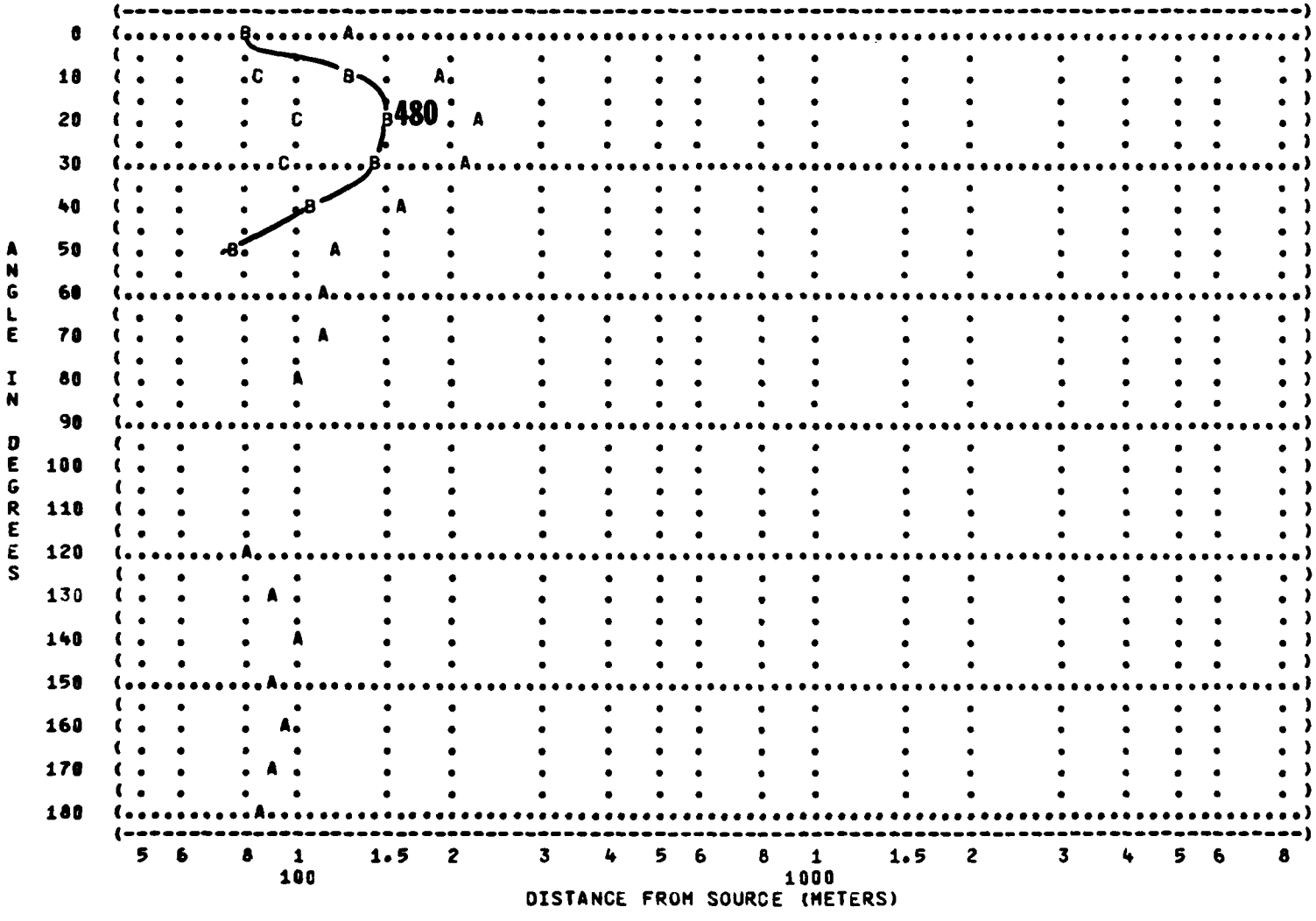


FIGURE: MAXIMUM PERMISSIBLE TIME (T) FOR ONE EXPOSURE PER DAY (AFR 161-35, JULY 73)
EQUAL TIME CONTOURS (MINUTES)

9

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05
14 SEP 78
PAGE 8

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

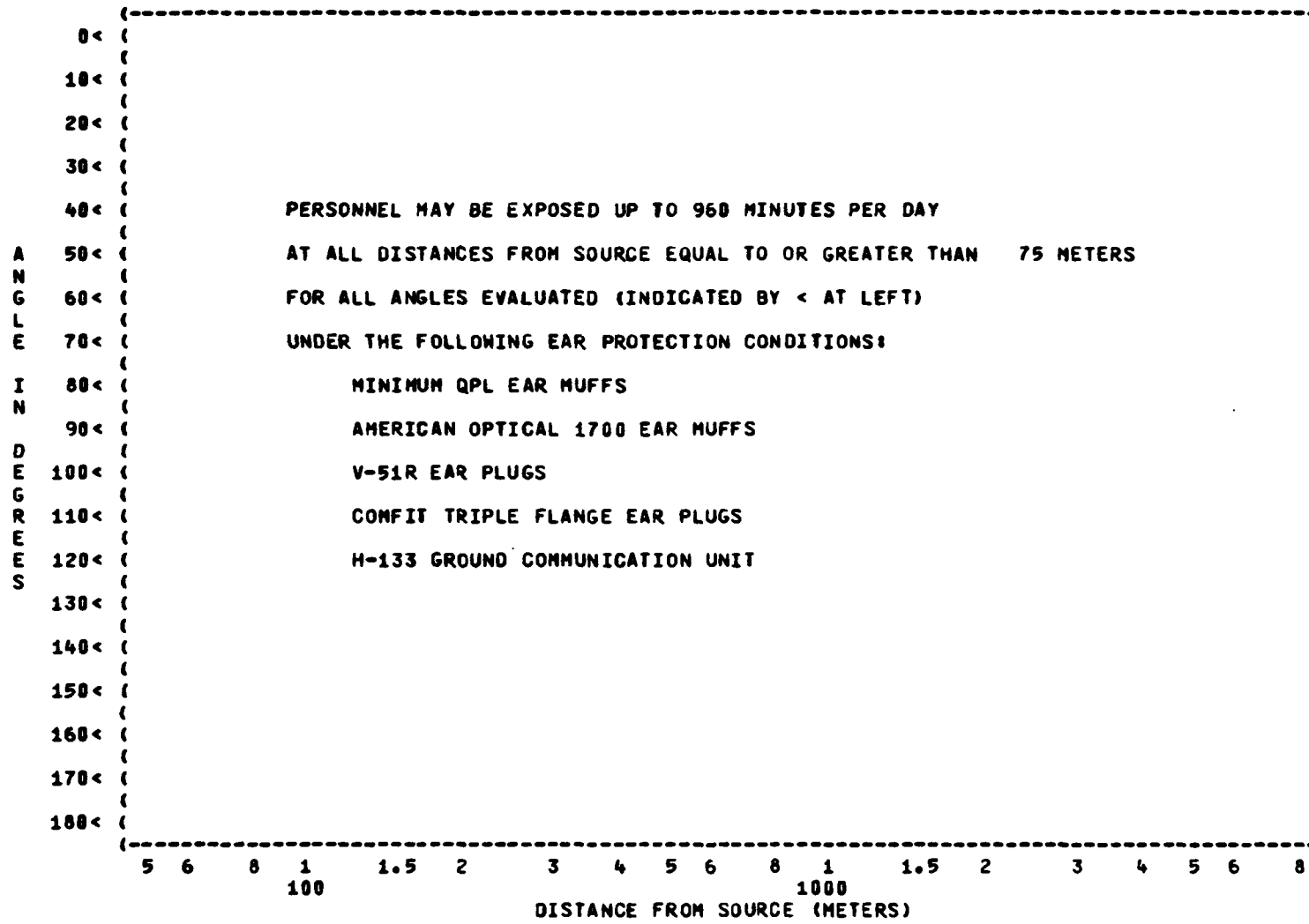


FIGURE 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: IDLE POWER 48% RPM SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 01 14 SEP 78 PAGE 18

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

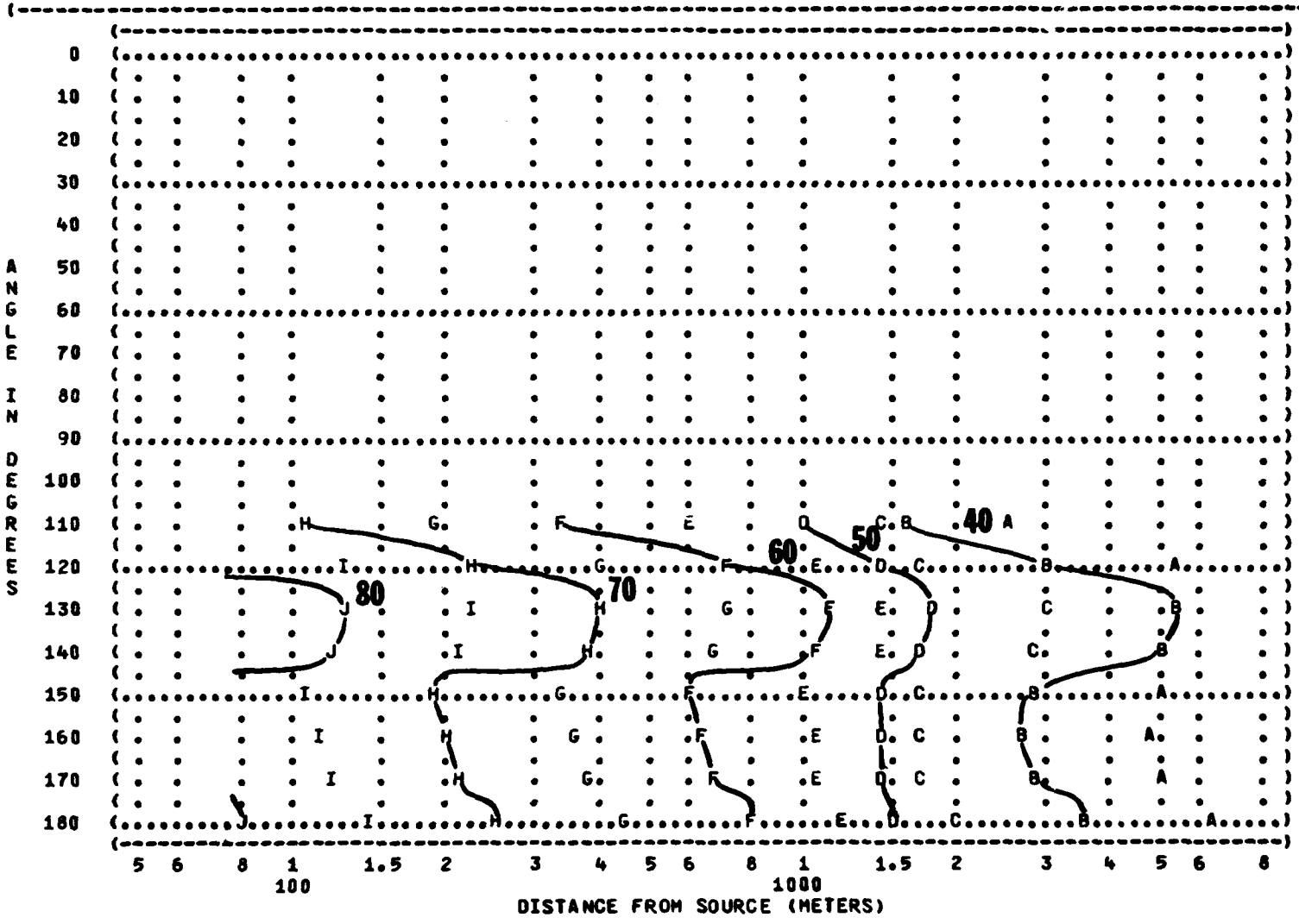


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 19

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

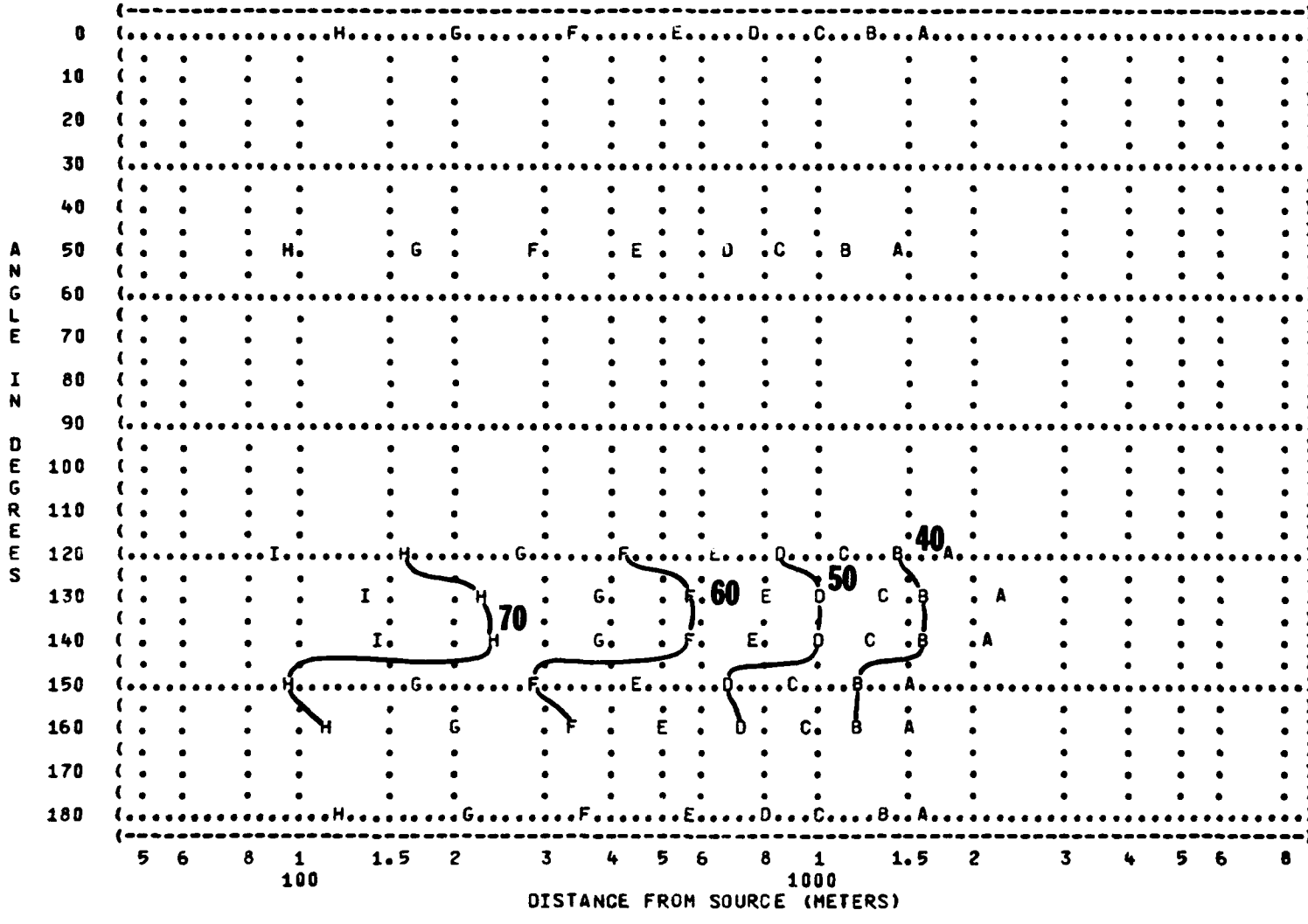


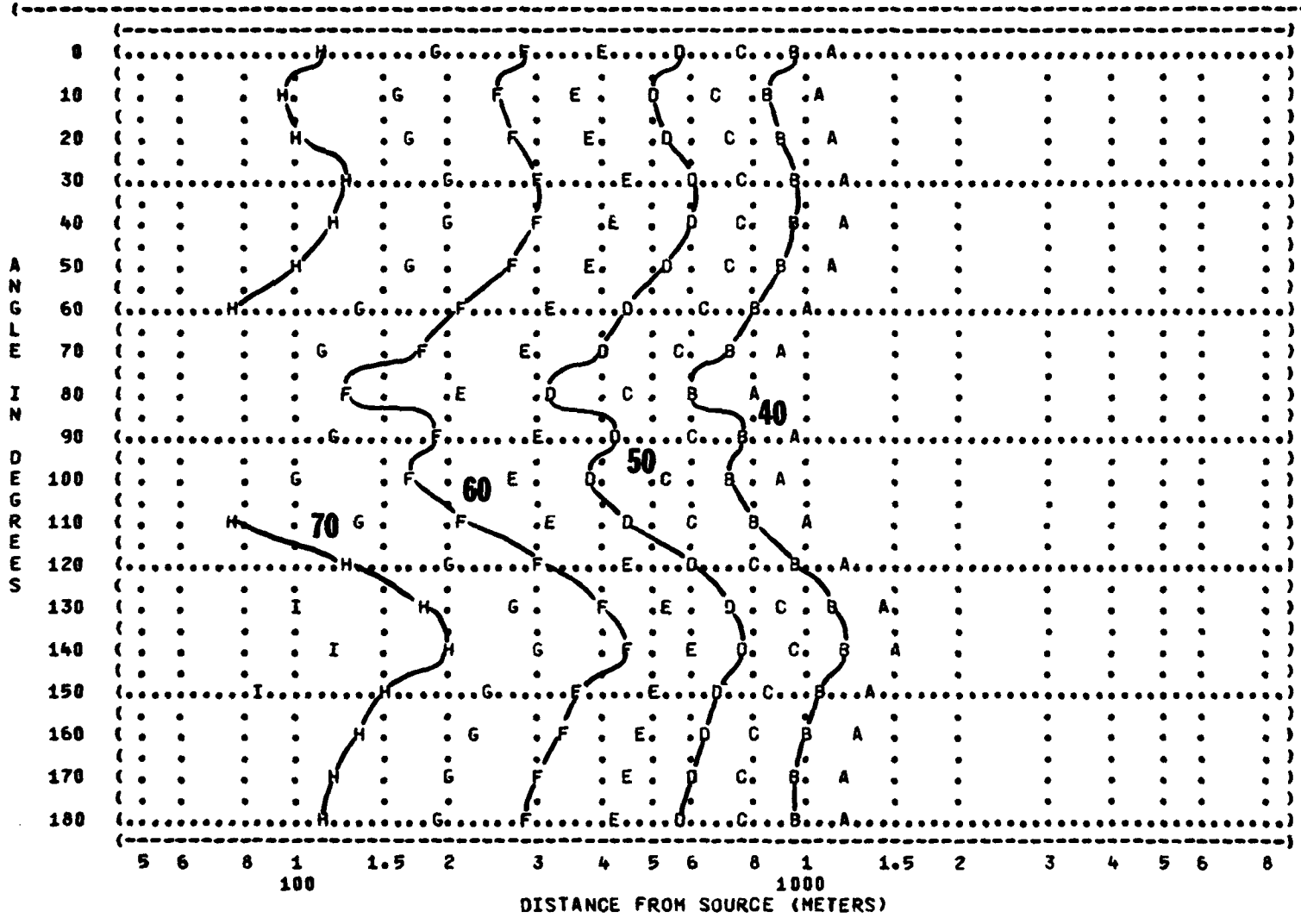
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-081
RUN 01
14 SEP 78
PAGE 20



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 21

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

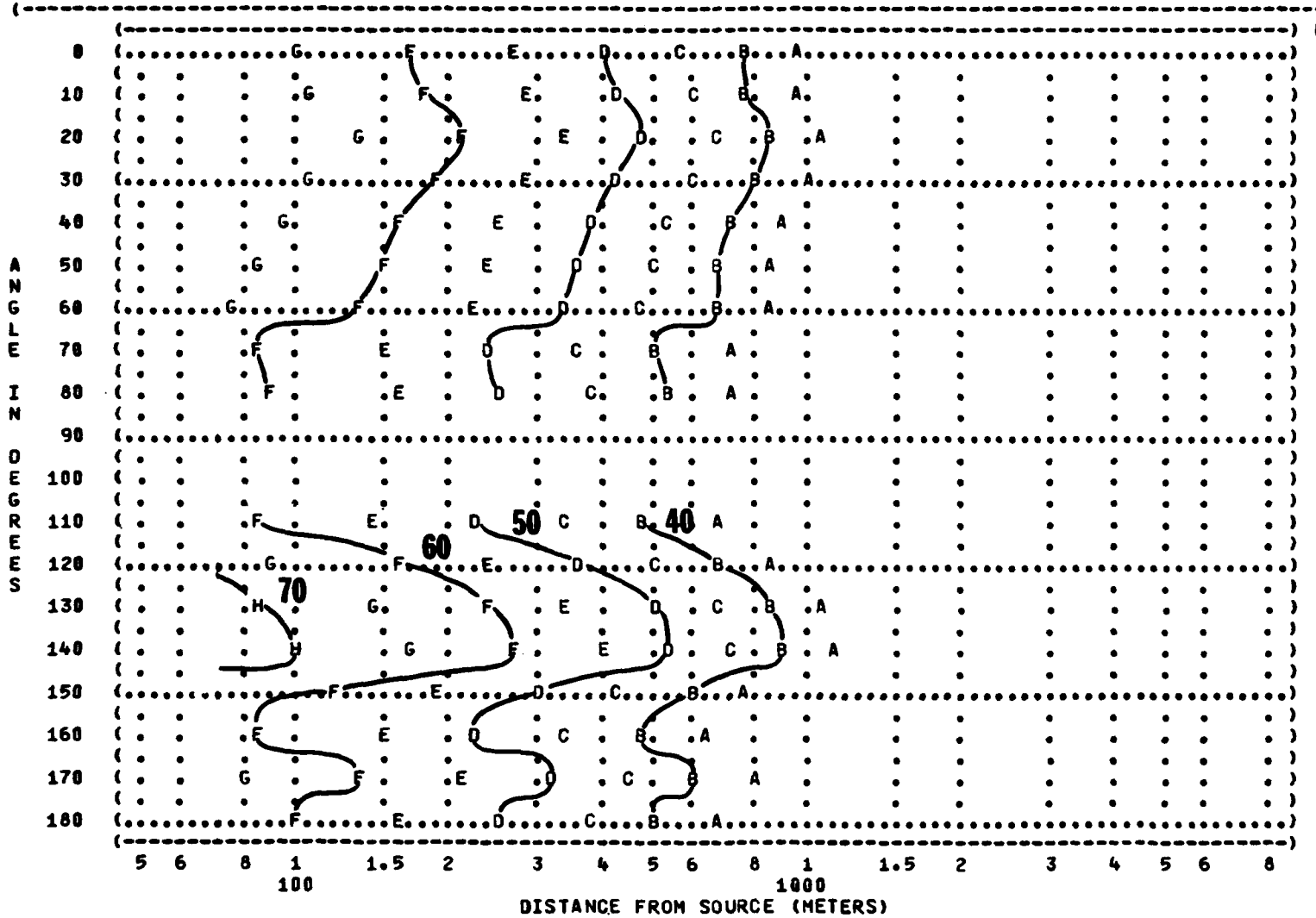


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 01 14 SEP 78 PAGE 22

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: IDLE POWER 48% RPM; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

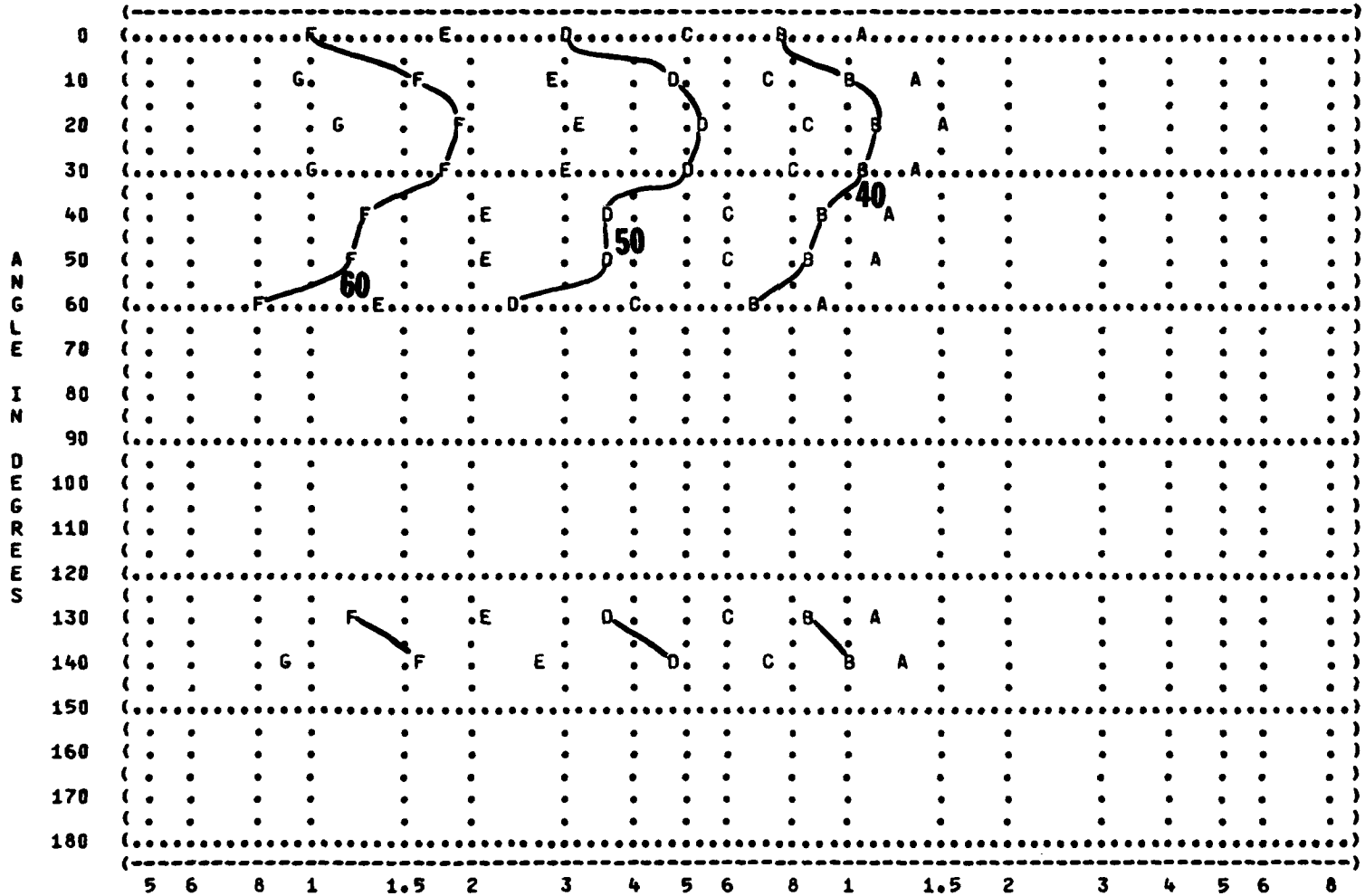


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 23

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

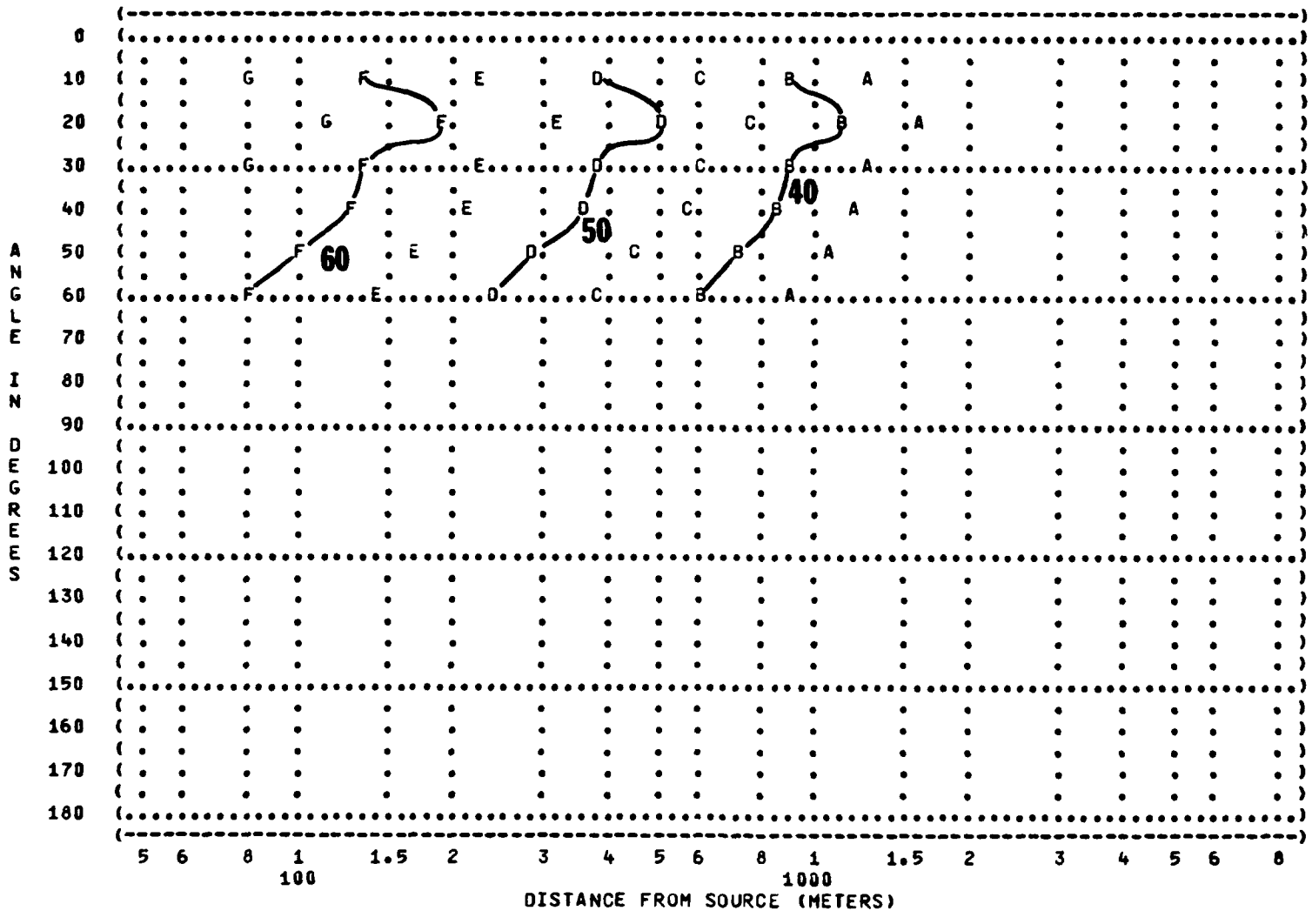


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 24

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

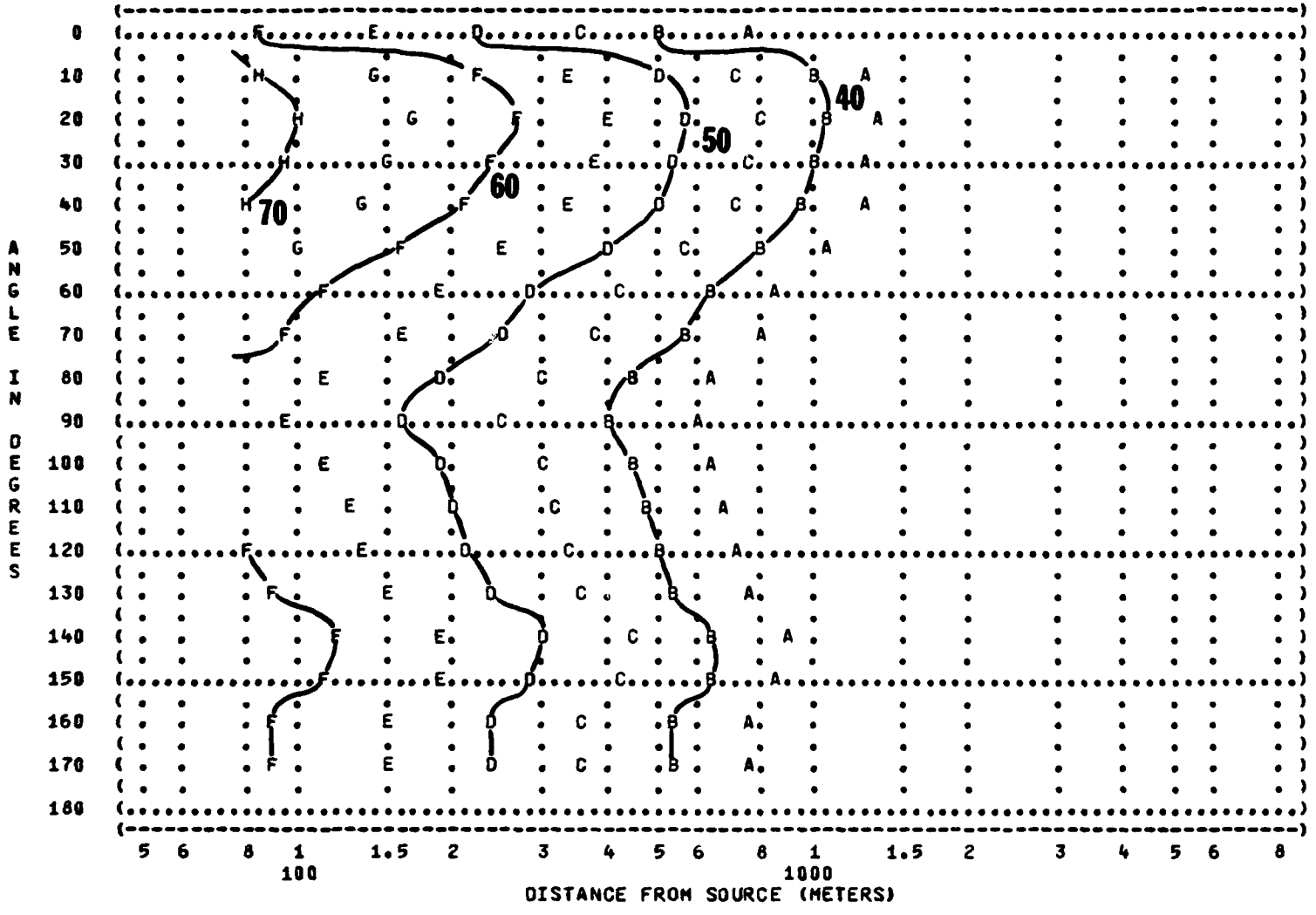


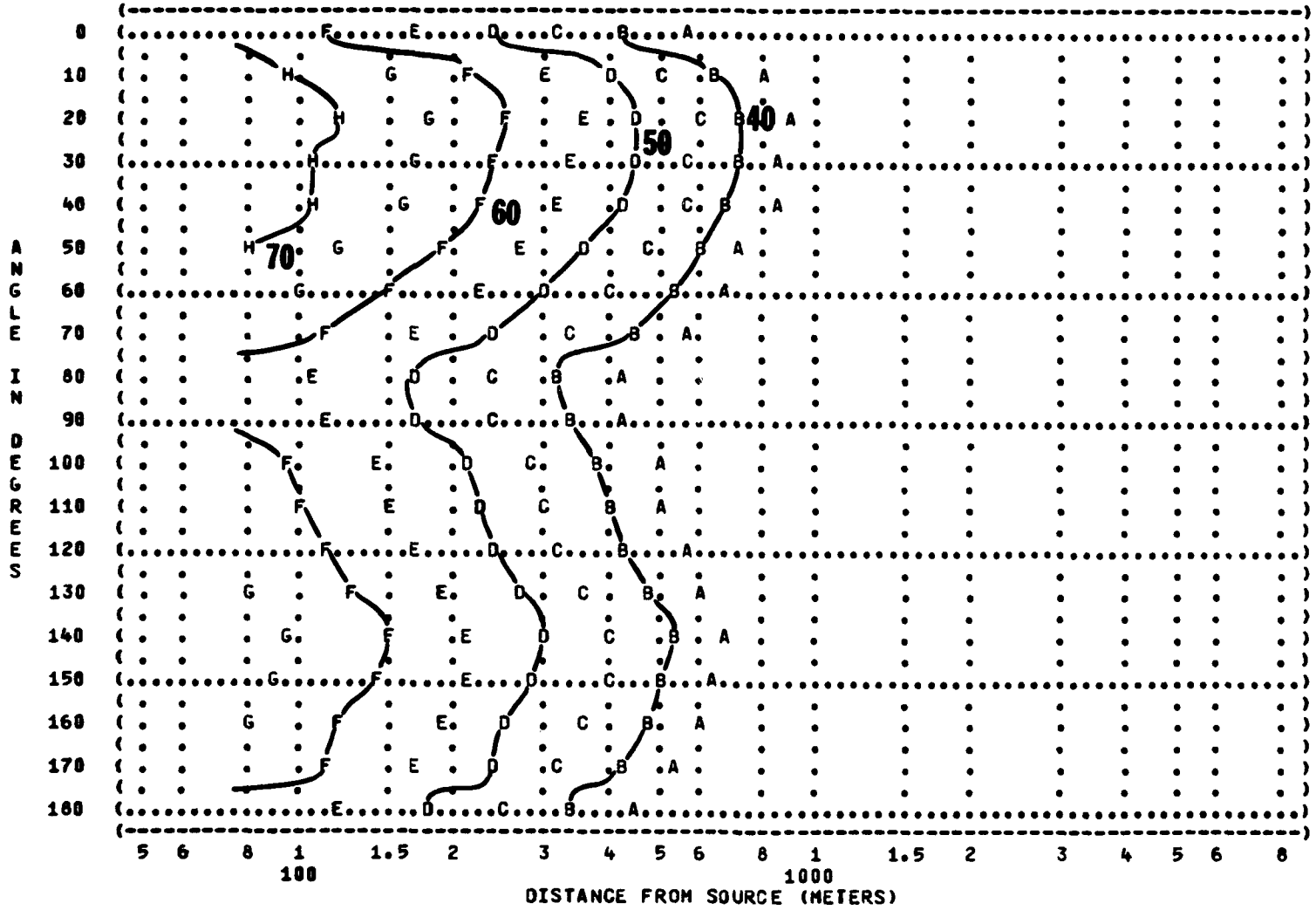
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
IDLE POWER 48% RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 01
14 SEP 78
PAGE 25



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 01 14 SEP 78 PAGE 26

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: IDLE POWER 48% RPM; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

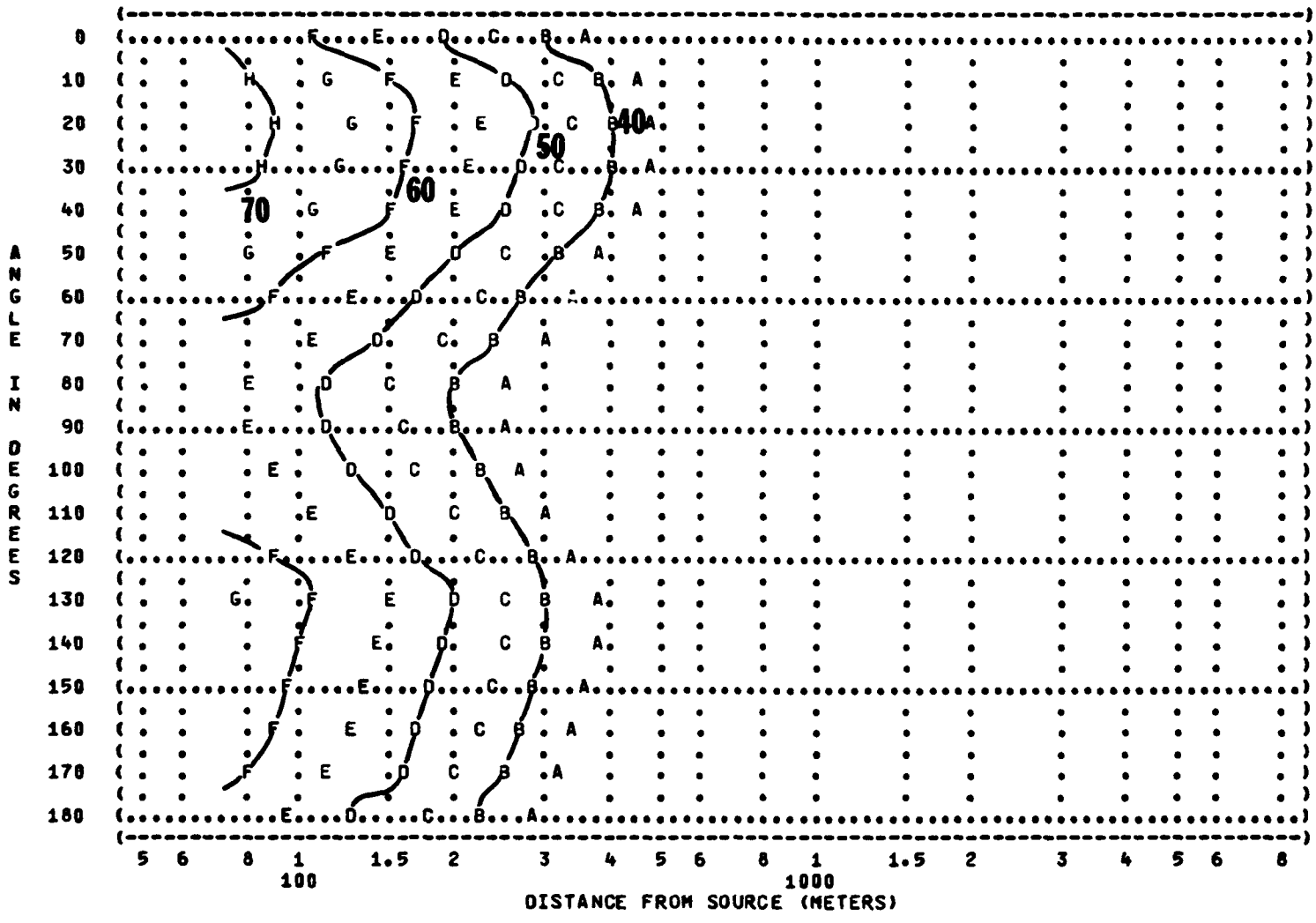


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 02
14 SEP 78
PAGE 18

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

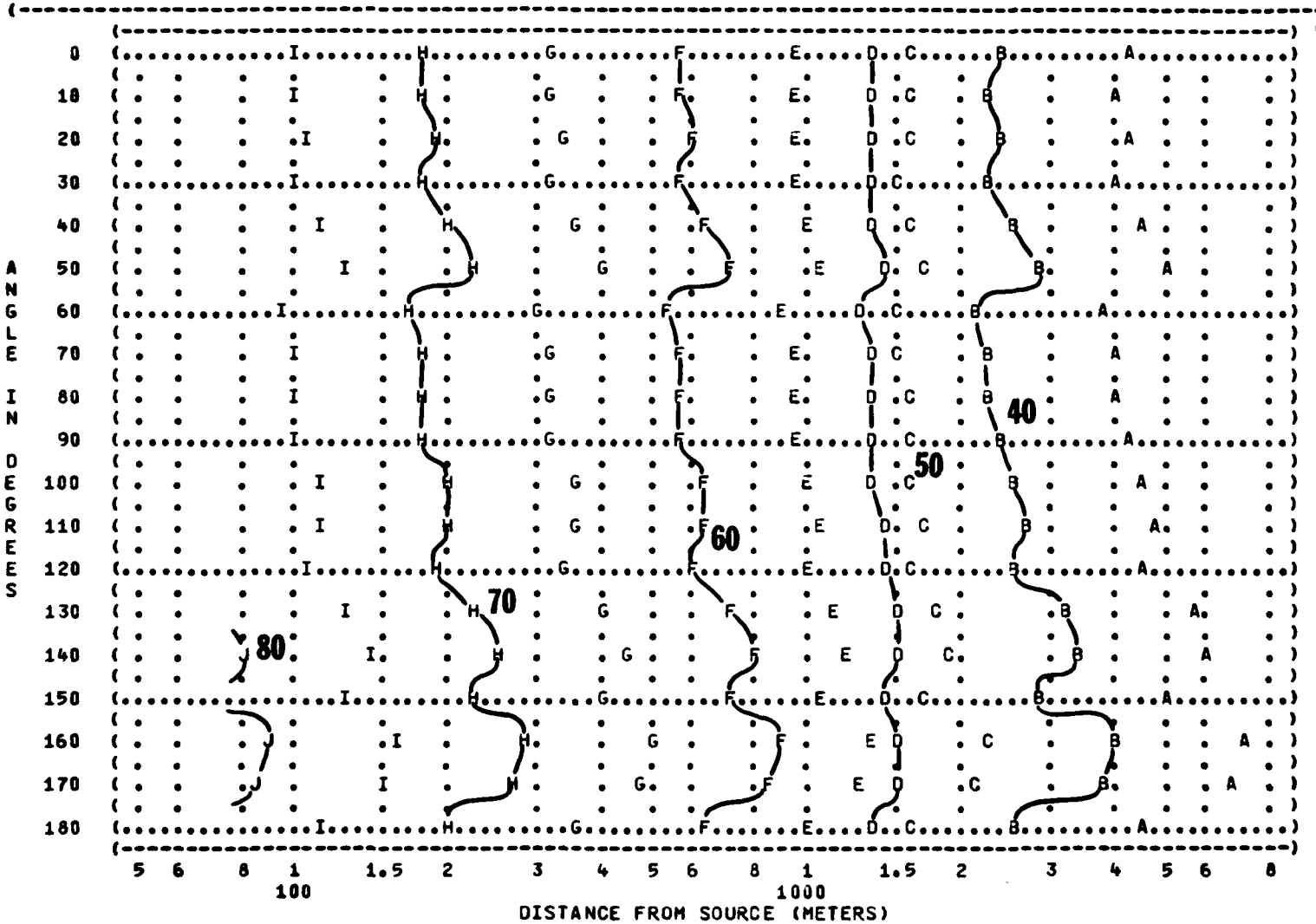


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: 75% RPM ENGINE RUNUP; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4; TEST 77-733-001; RUN 02; 14 SEP 78

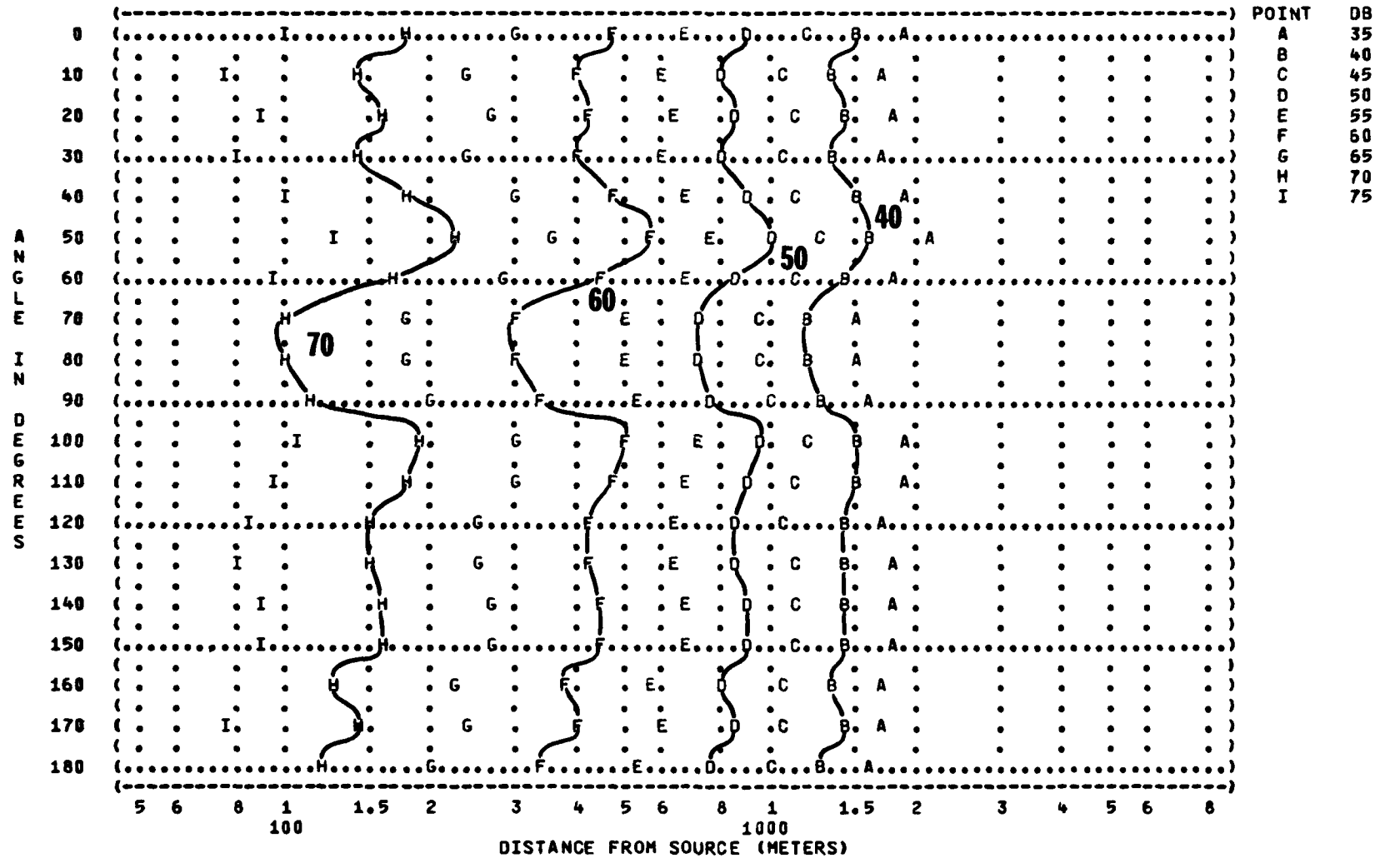


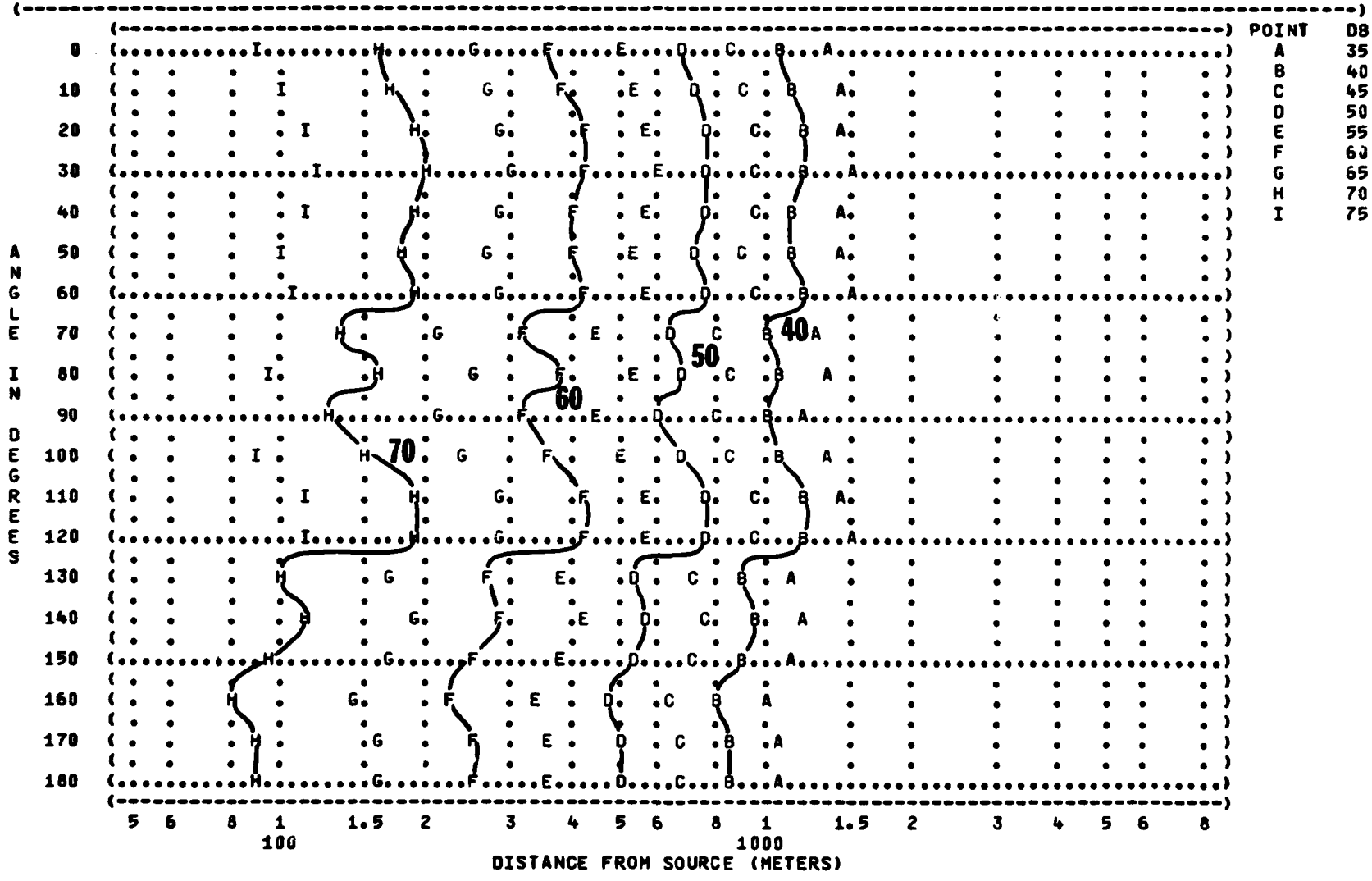
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 02 14 SEP 78 PAGE 20

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: 75% RPM ENGINE RUNUP SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 02 14 SEP 78 PAGE 21

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: 75% RPM ENGINE RUNUP; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

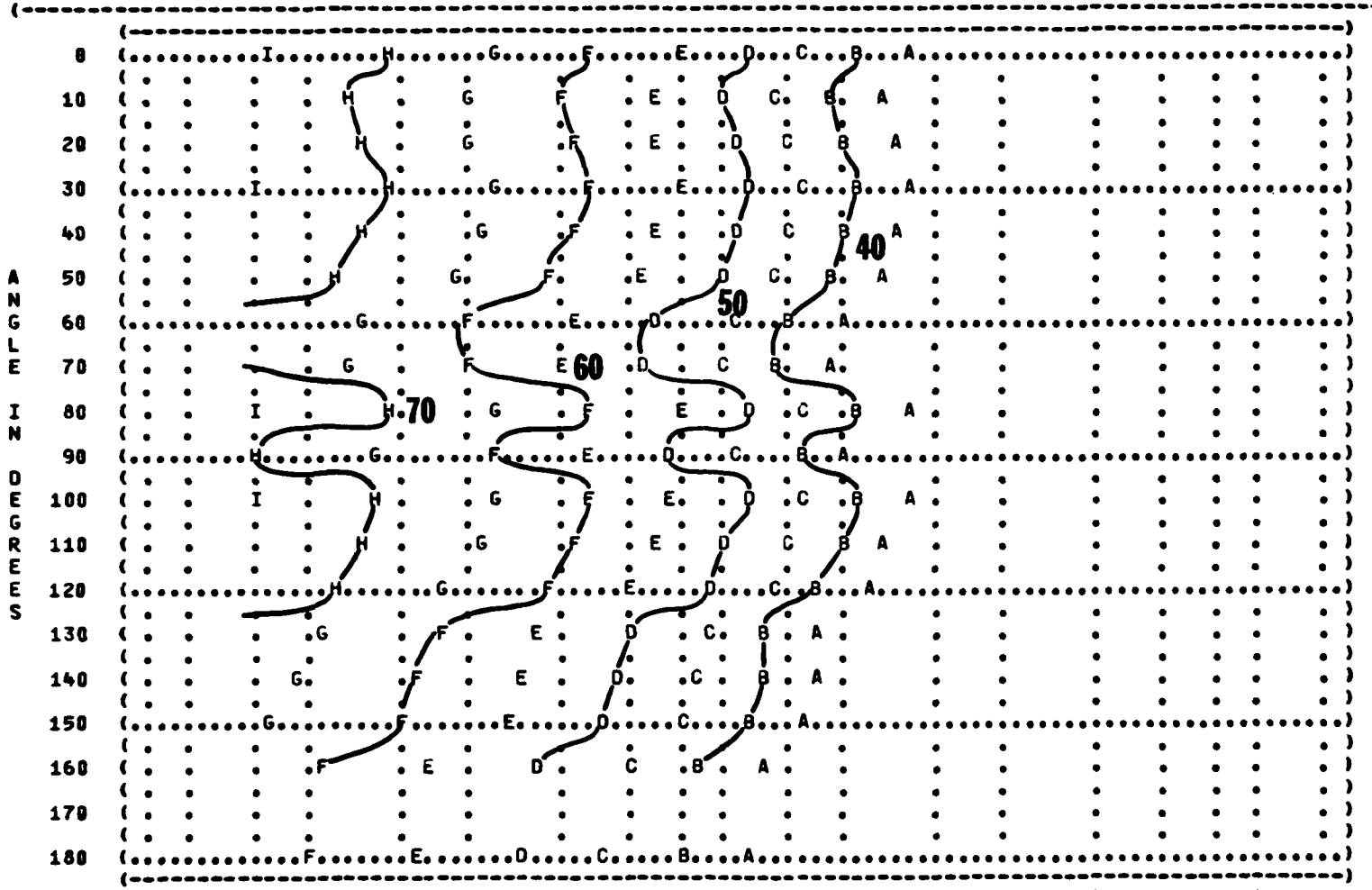


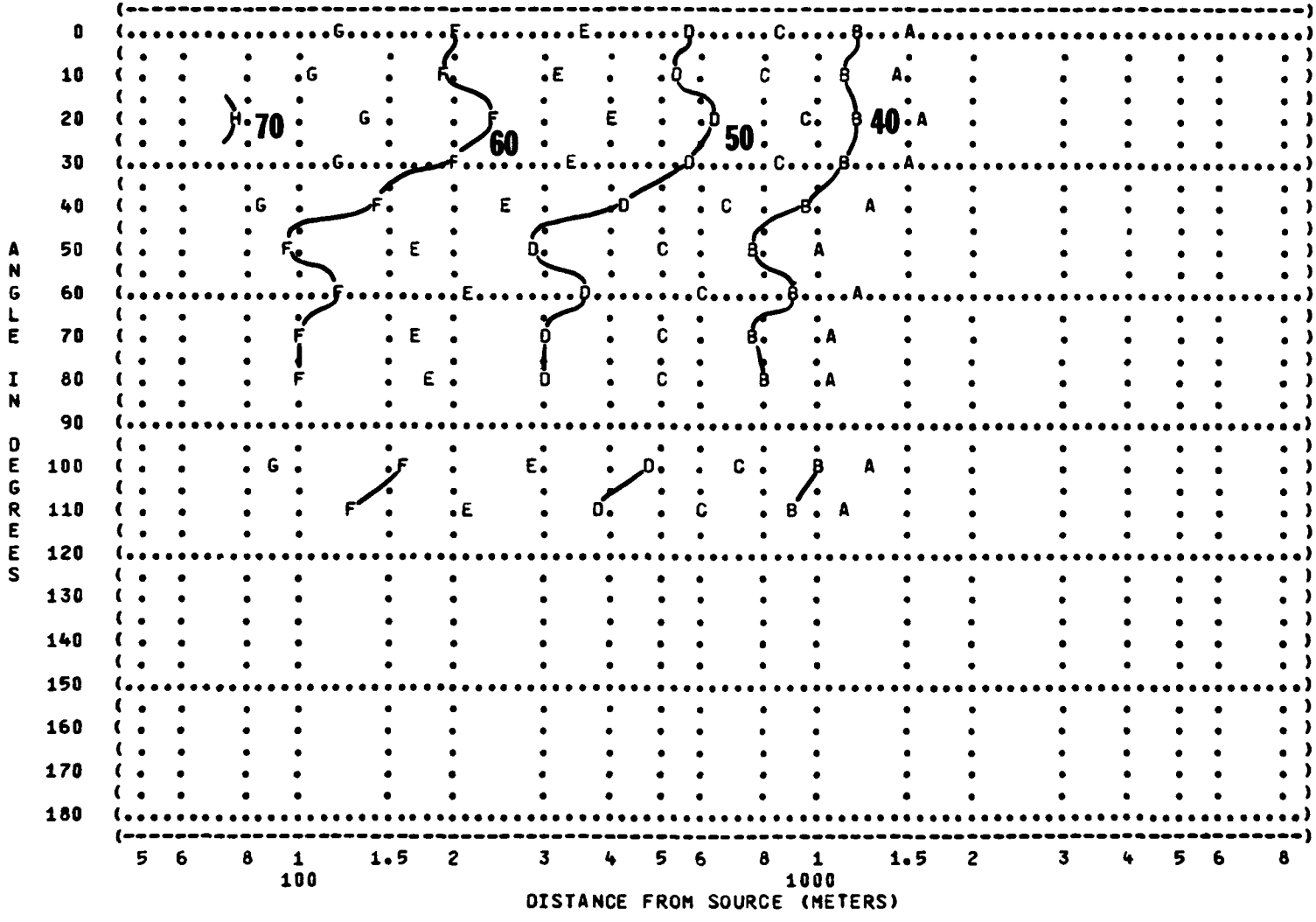
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 02 14 SEP 78 PAGE 22

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: 75% RPM ENGINE RUNUP SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

FIGURE 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 02
14 SEP 78
PAGE 23

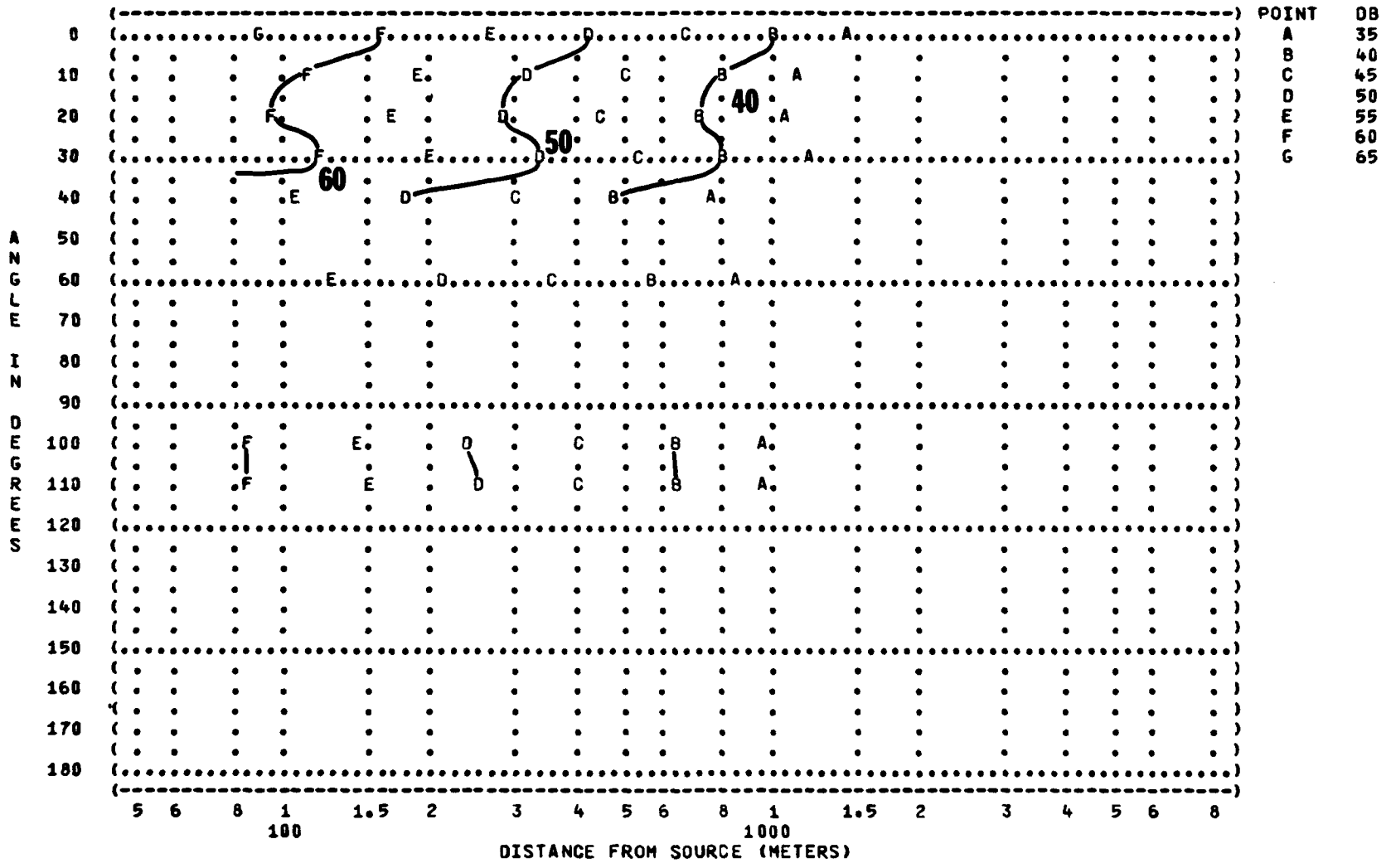


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 02
14 SEP 78
PAGE 24

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

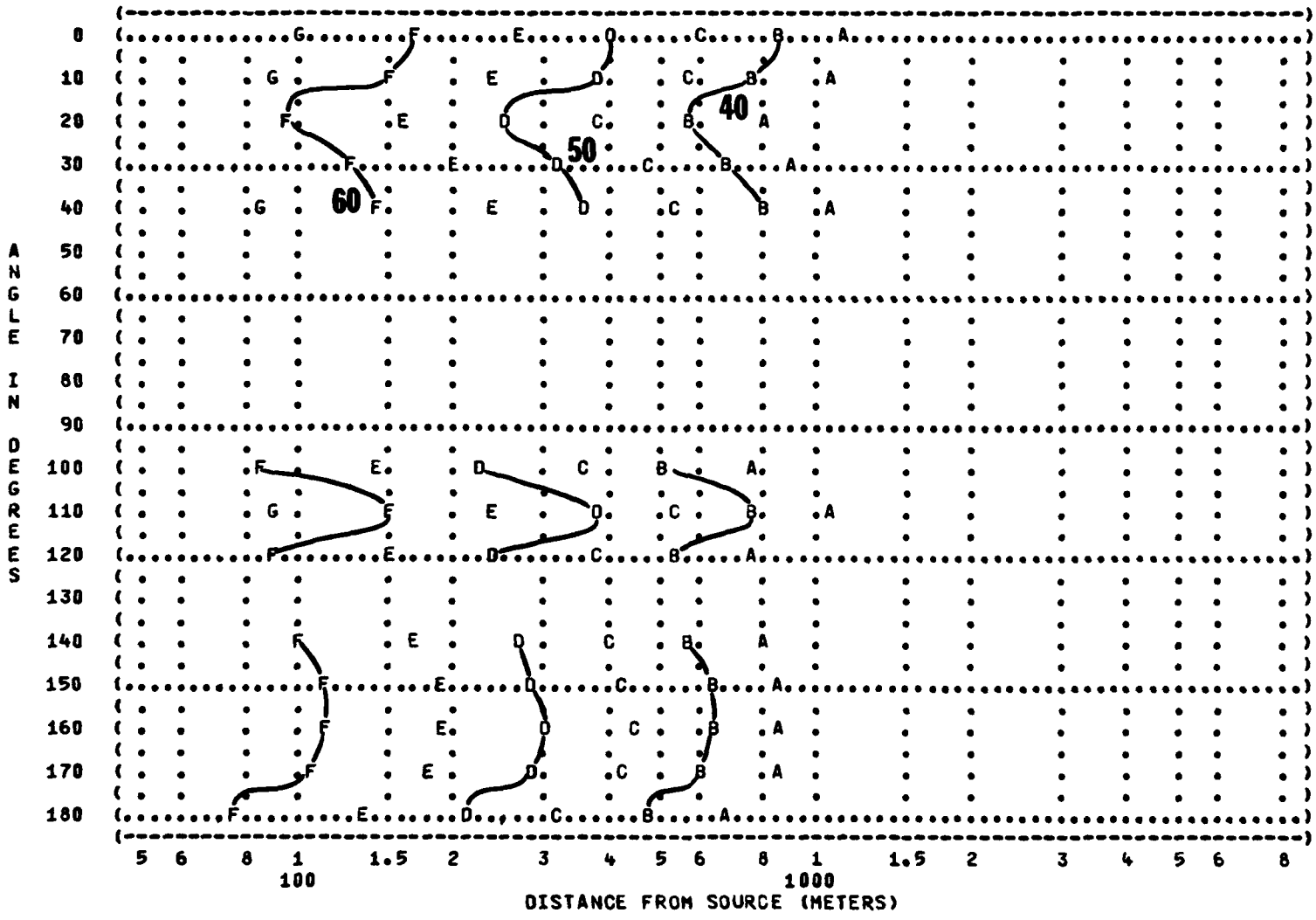


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 02
14 SEP 78
PAGE 25

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
75% RPM ENGINE RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 H HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

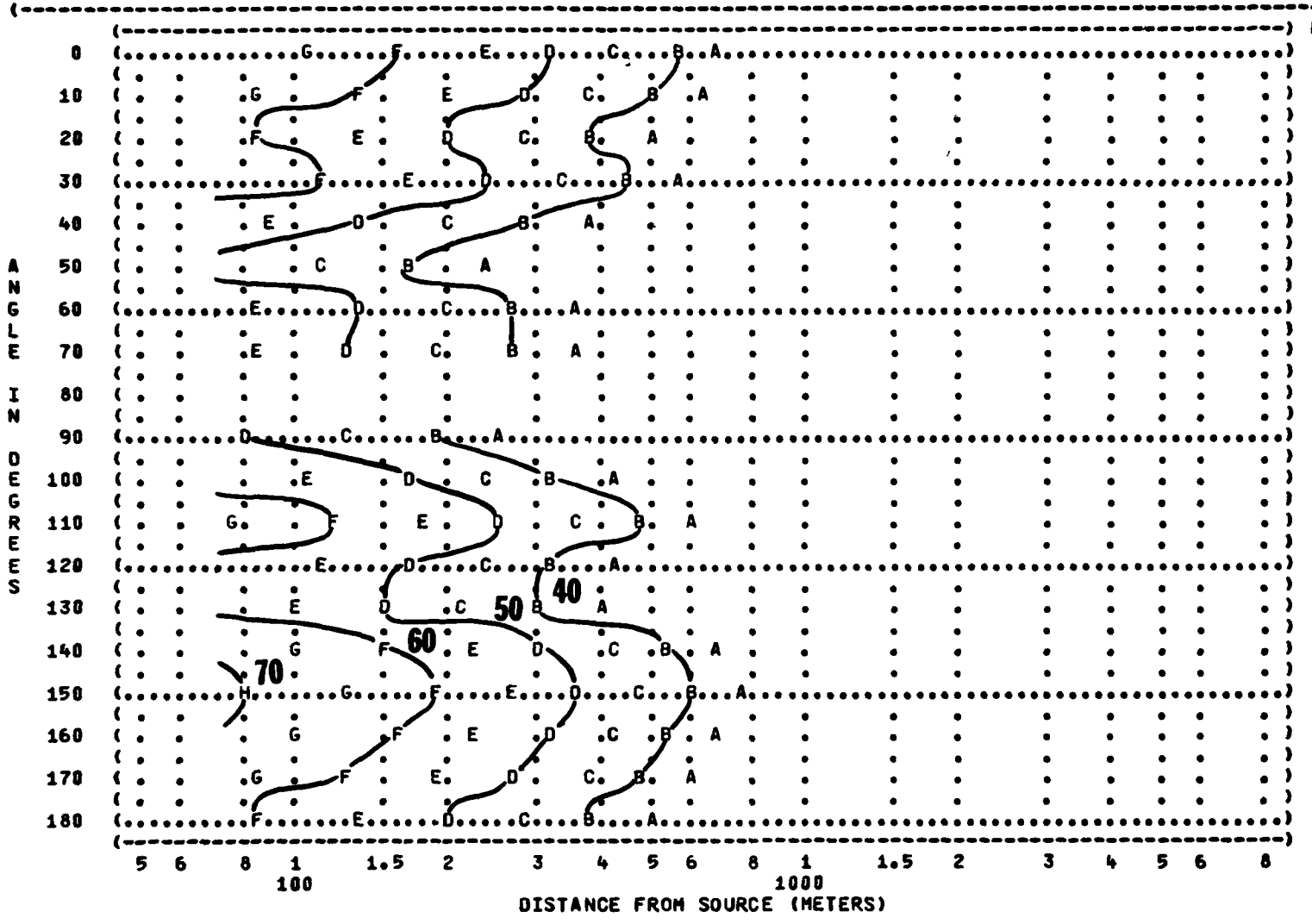


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 02 14 SEP 78 PAGE 26

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: 75% RPM ENGINE RUNUP SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

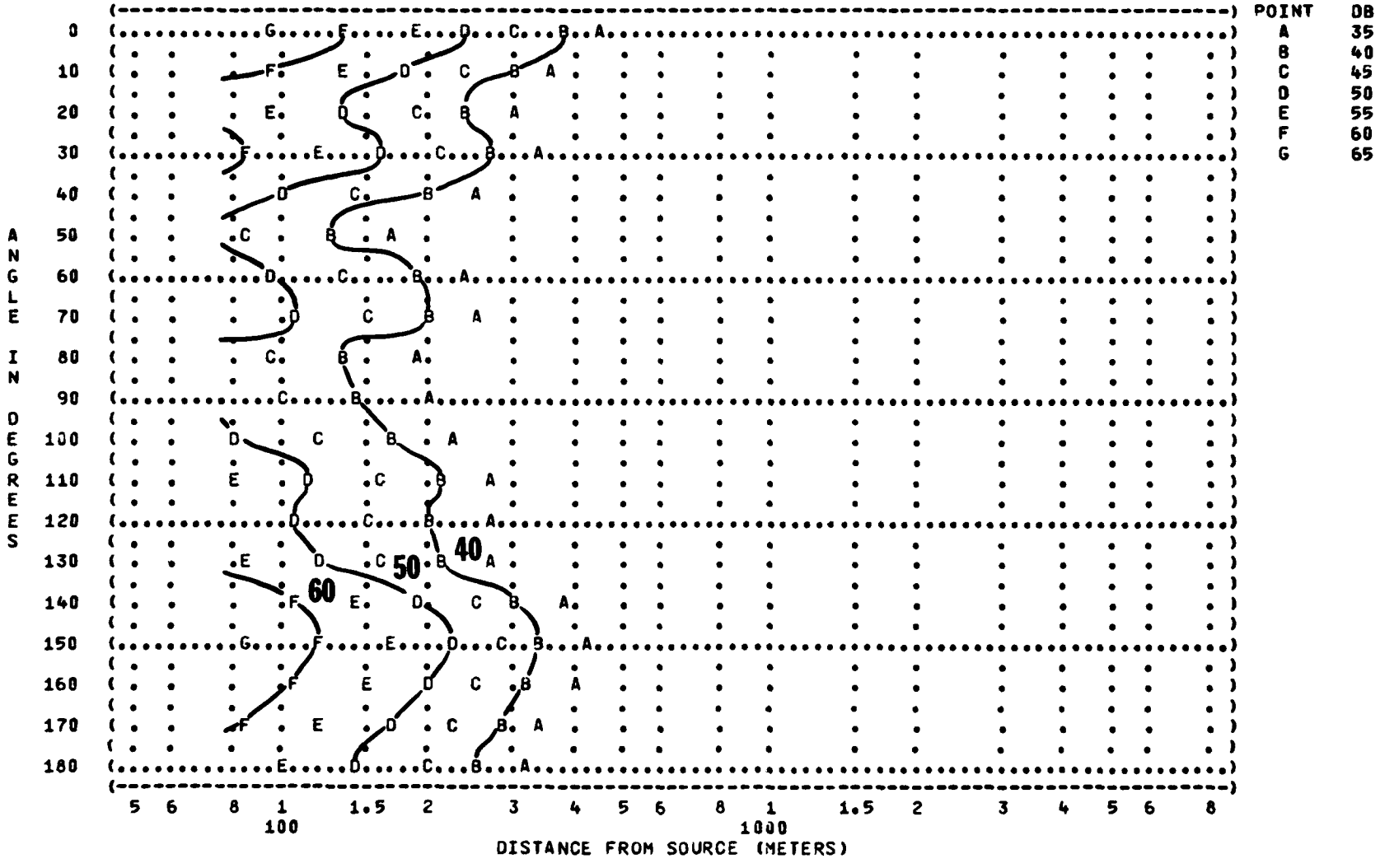


FIGURE 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 18

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85

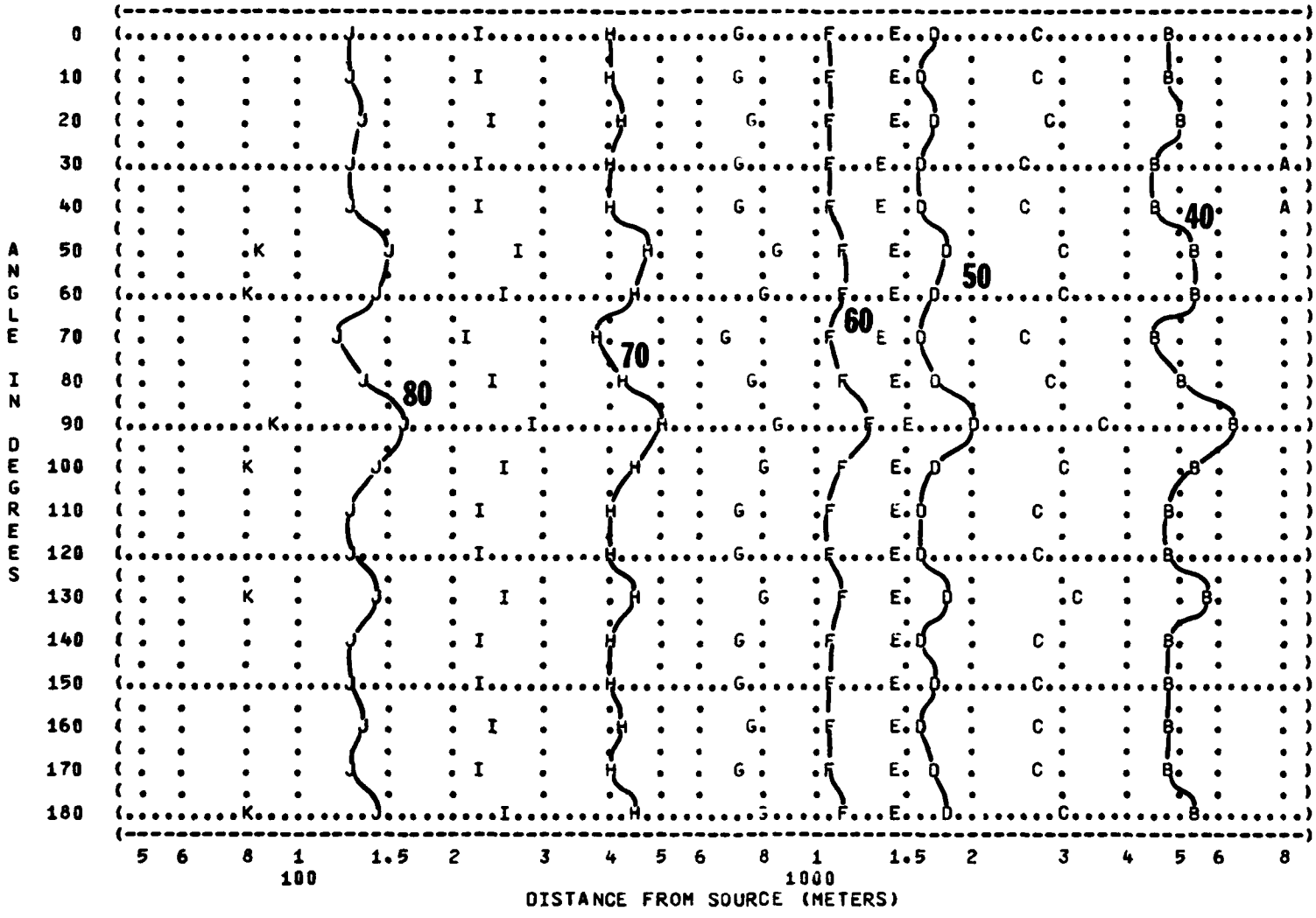


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 03 14 SEP 78 PAGE 19

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: 94% RPM POWER RUNUP SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

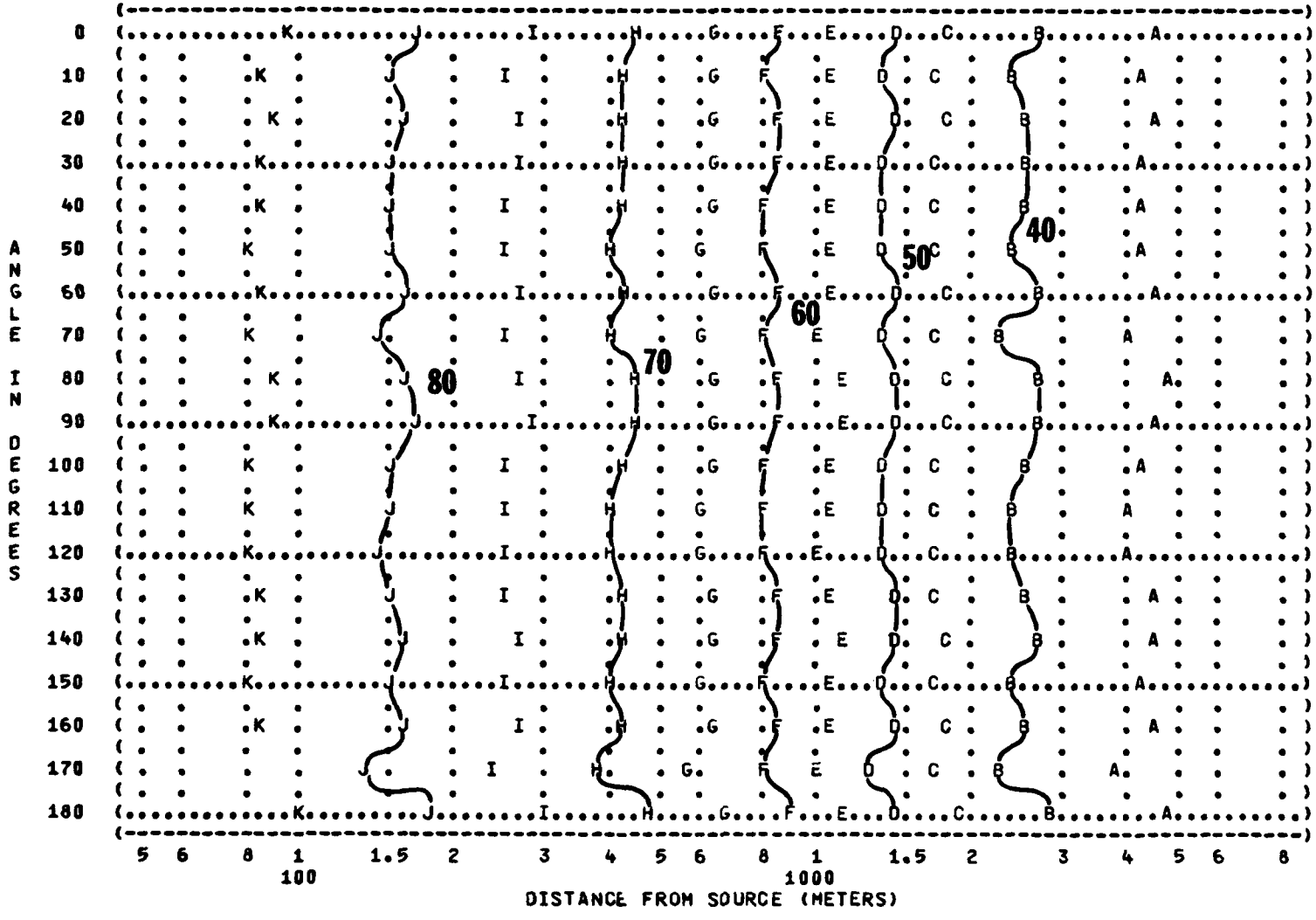


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: 94% RPM POWER RUNUP; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4; TEST 77-733-001; RUN 03; 14 SEP 78; PAGE 20

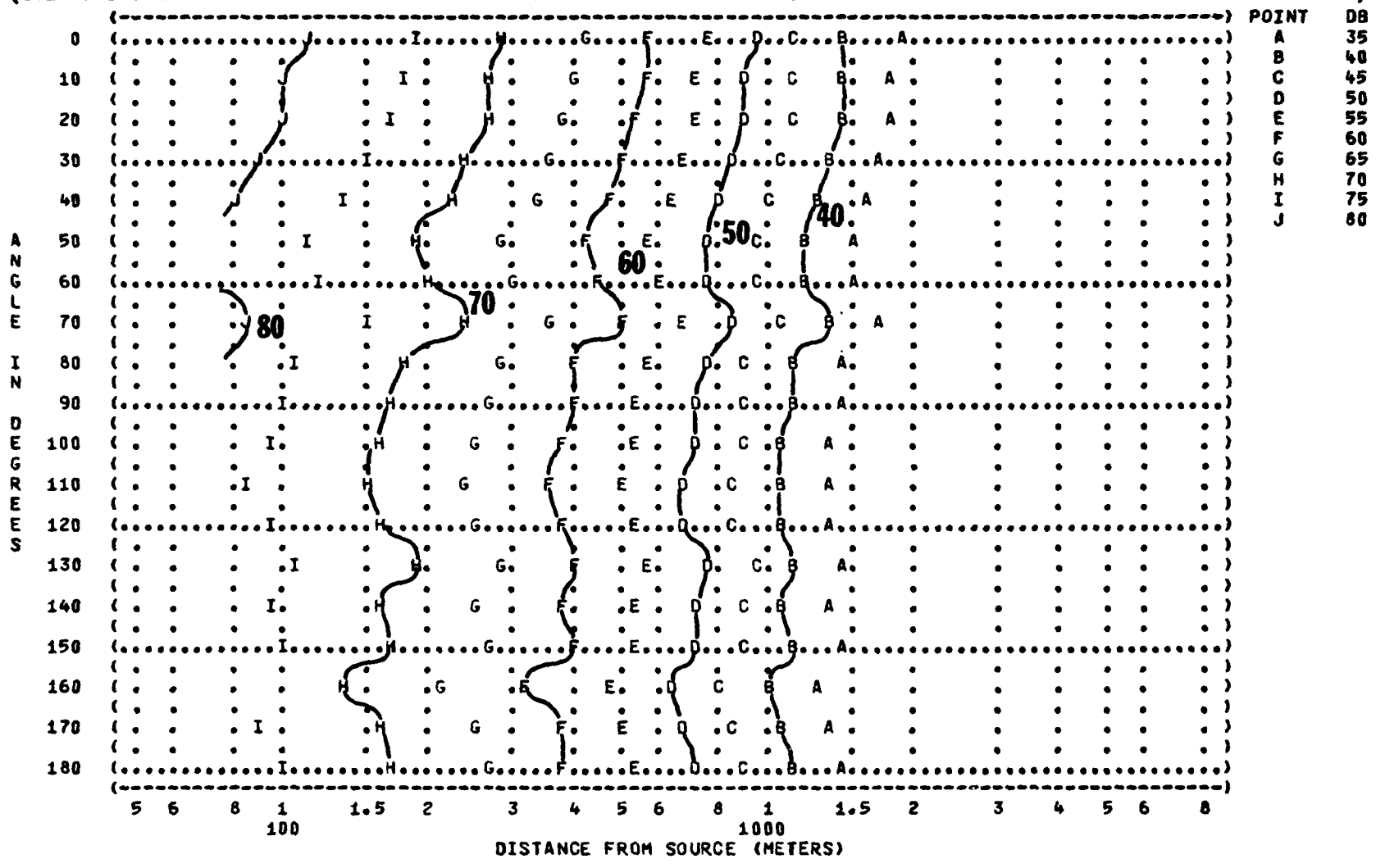


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

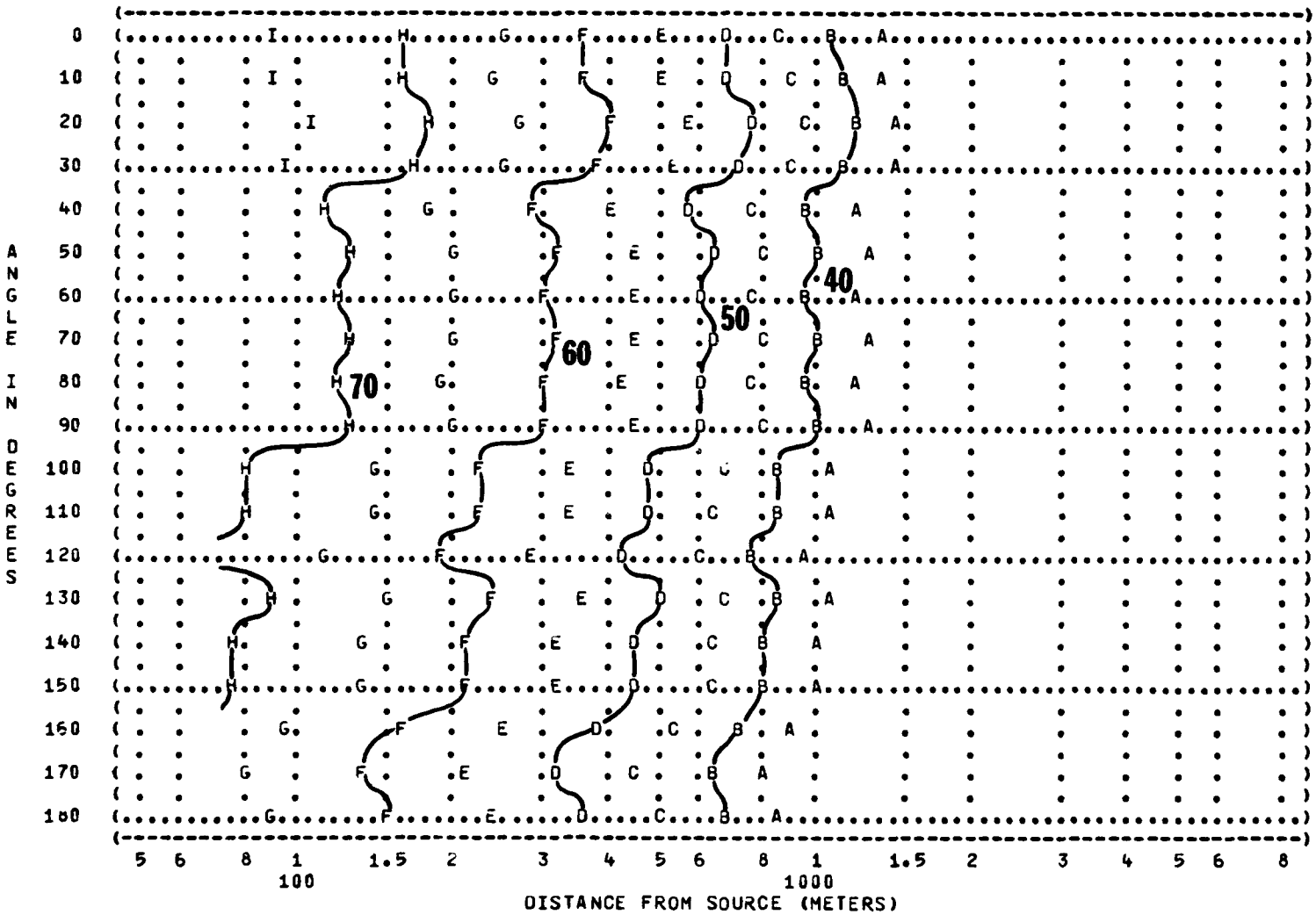
NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 21

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75



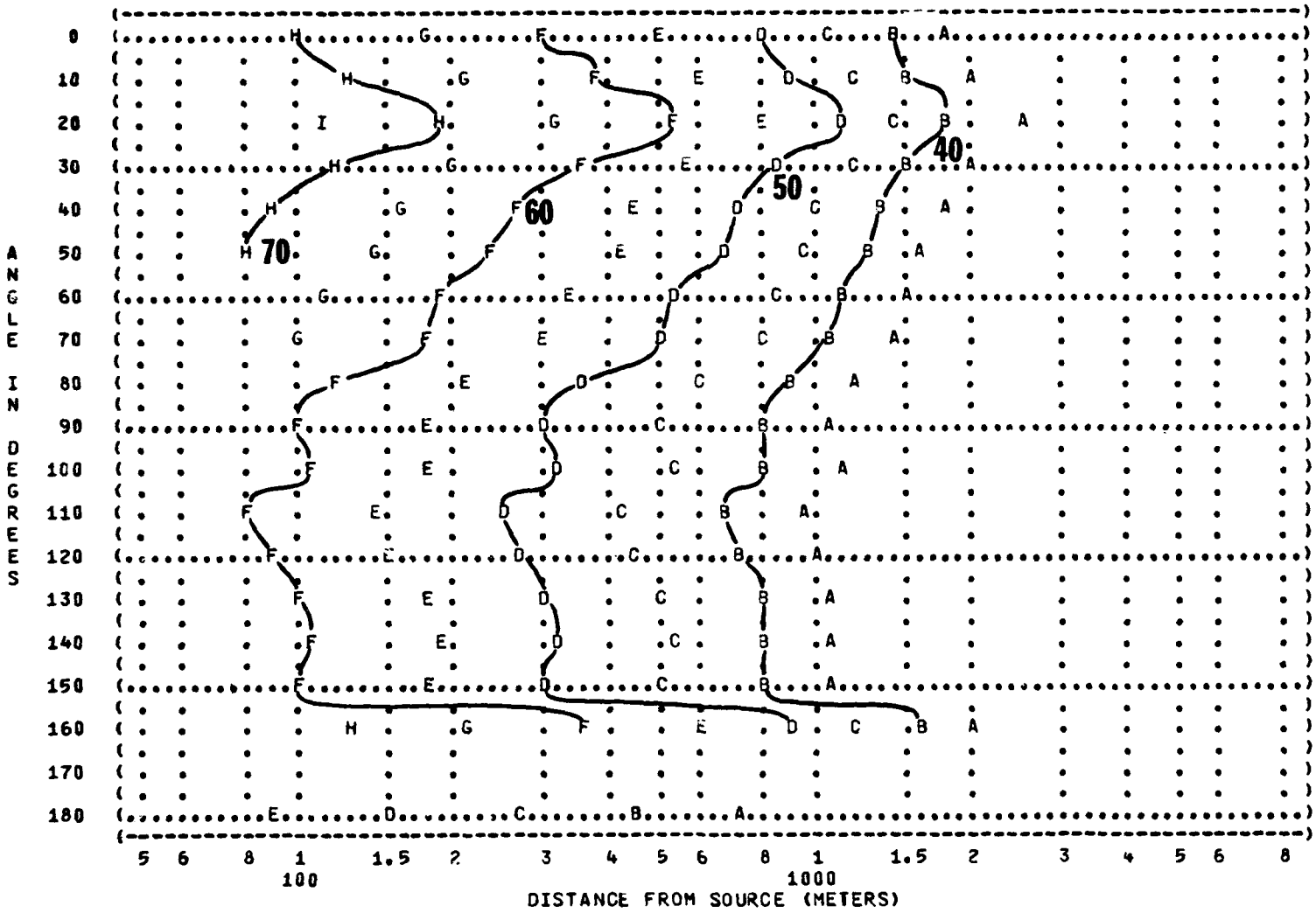
SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
500 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 22

SOURCE/SUBJECT:
F-16 AIRCRAFT IN THE
AF 32A-16-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
1000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 23

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

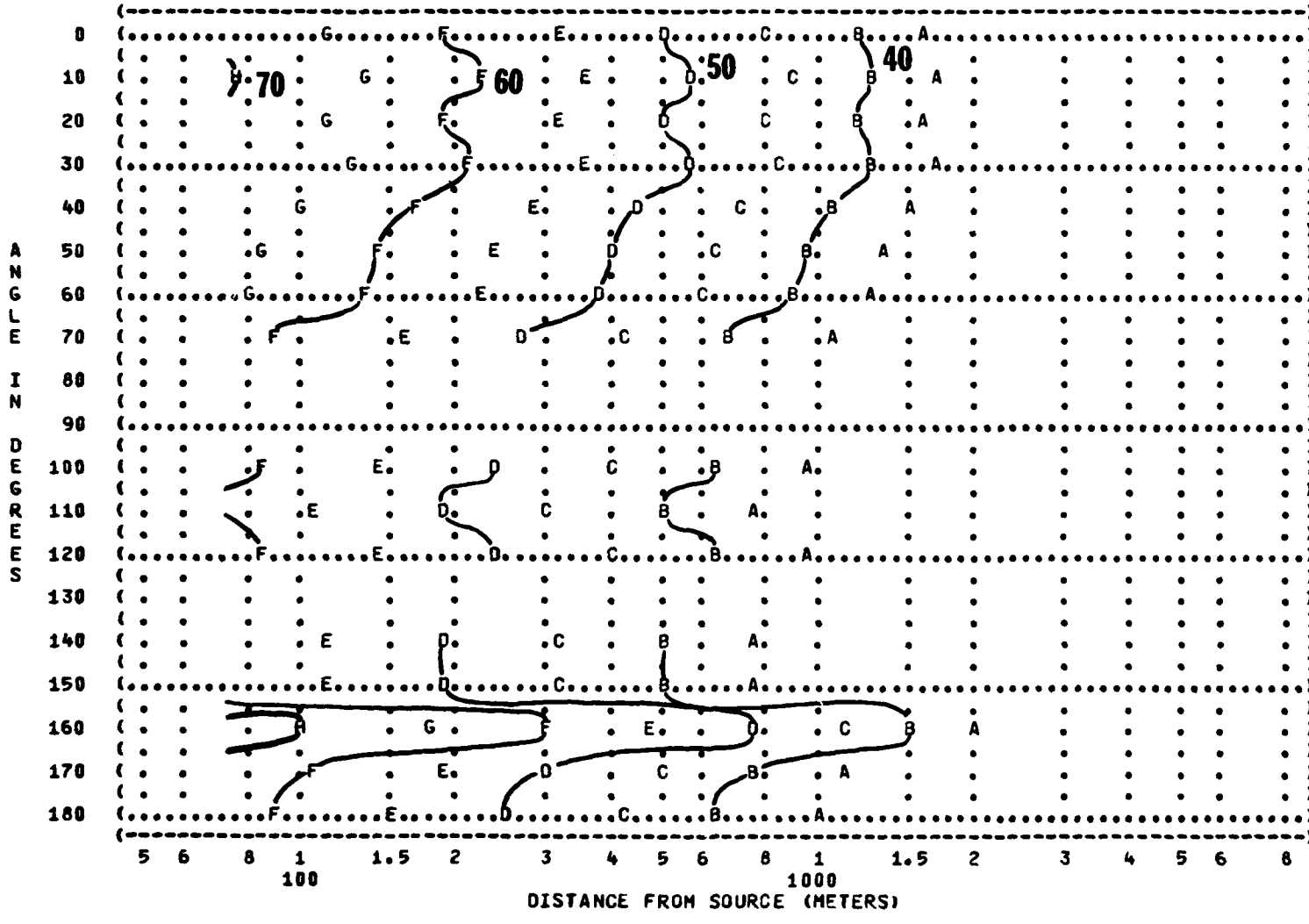


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
2000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 24

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

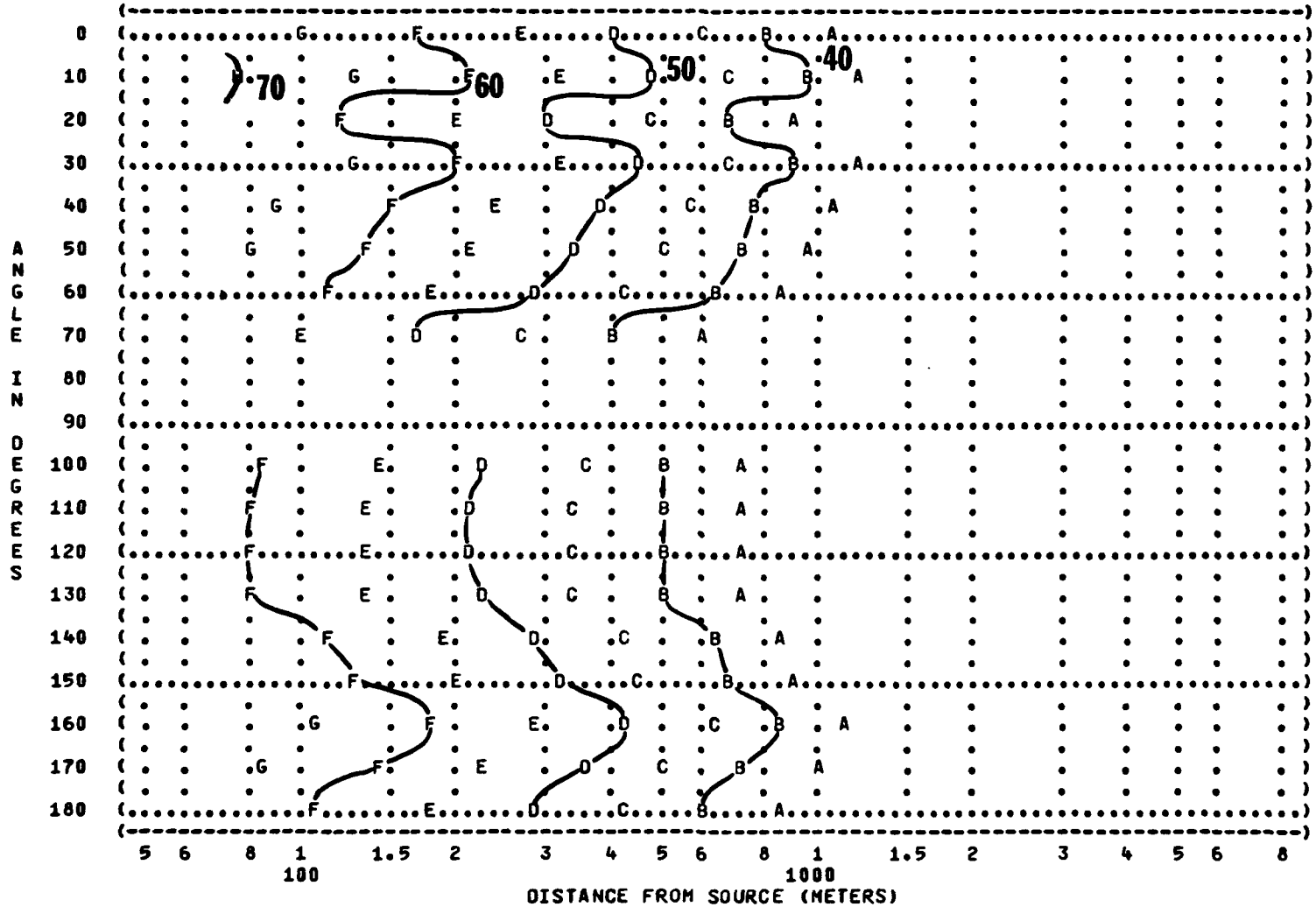


FIGURE 10: SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
4000 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 03
14 SEP 78
PAGE 25

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
94% RPM POWER RUNUP
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

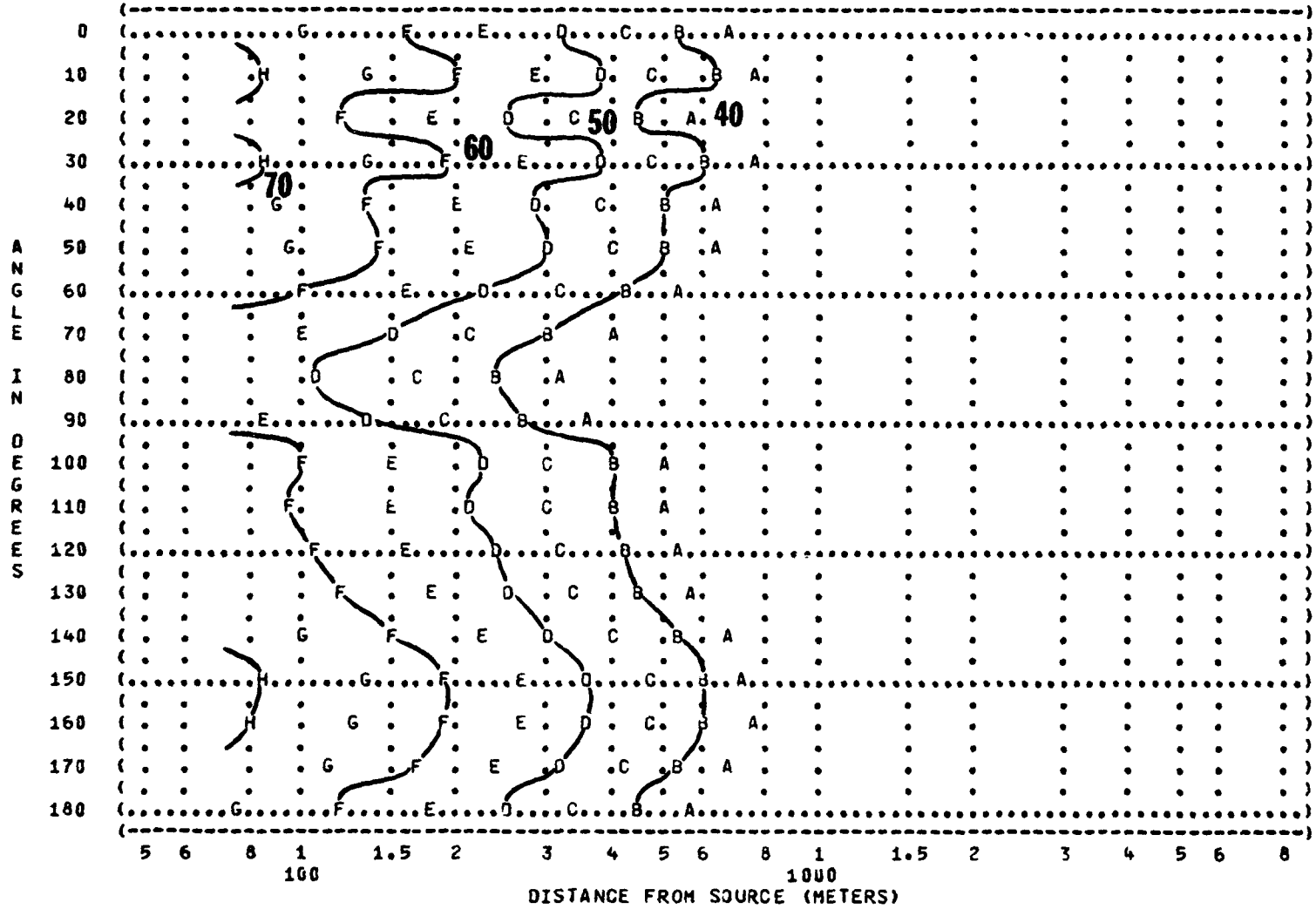


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATIONS: OMEGA 1.4 TEST 77-733-001 RUN 03 14 SEP 78 PAGE 26

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: 94% RPM POWER RUNUP SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65

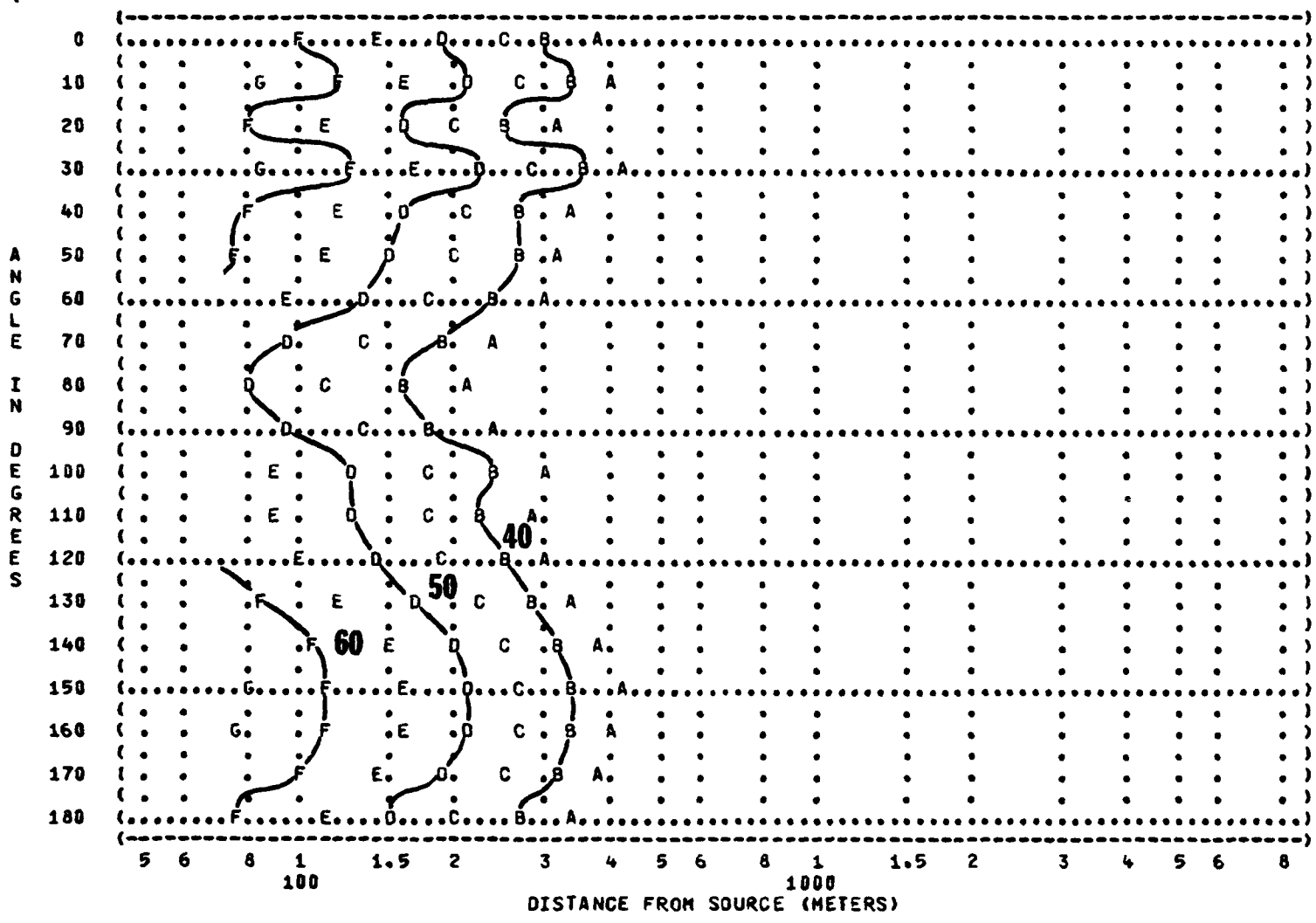


FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 18

POINT	DB
A	40
B	45
C	50
D	55
E	60
F	65
G	70
H	75
I	80
J	85

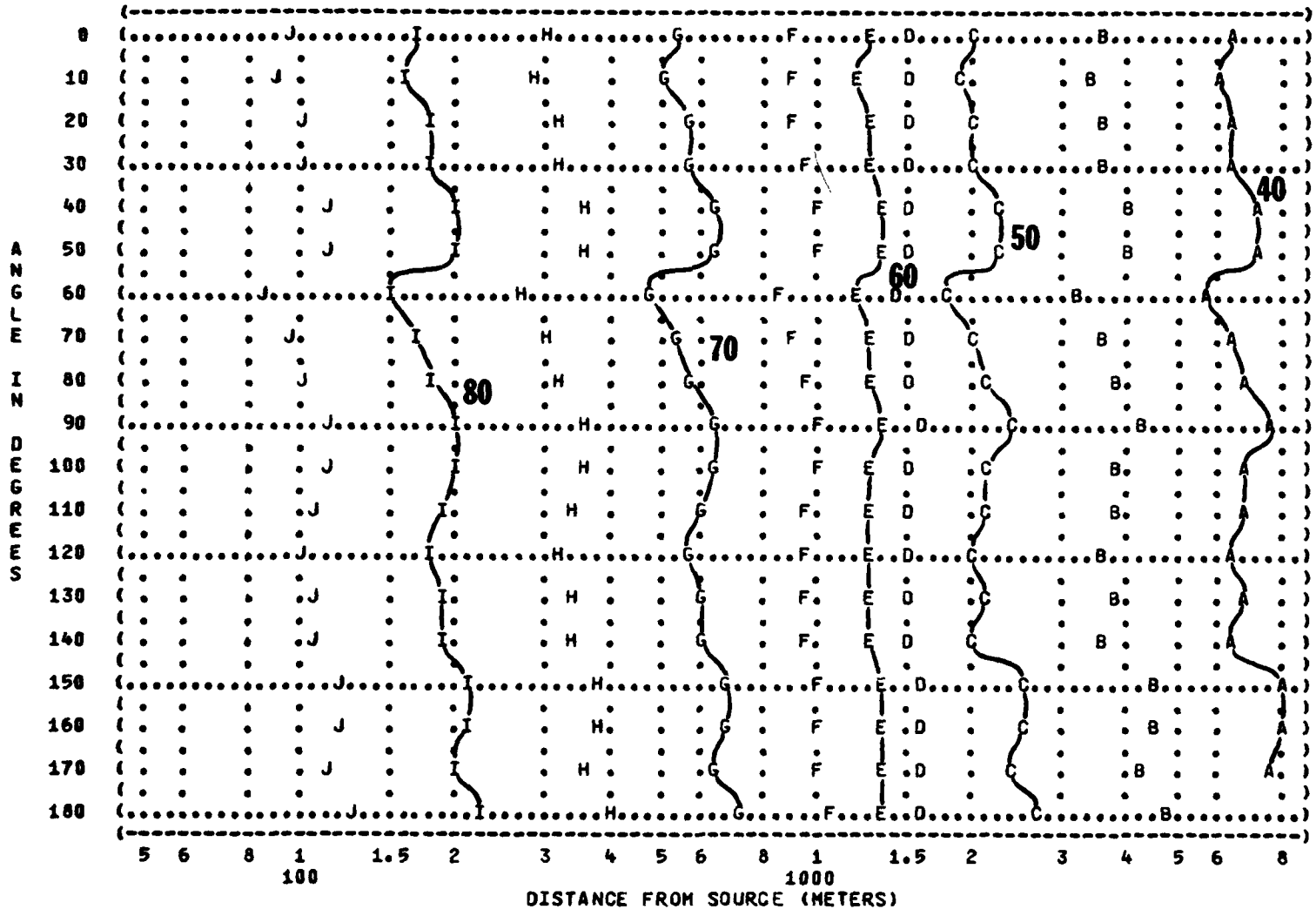


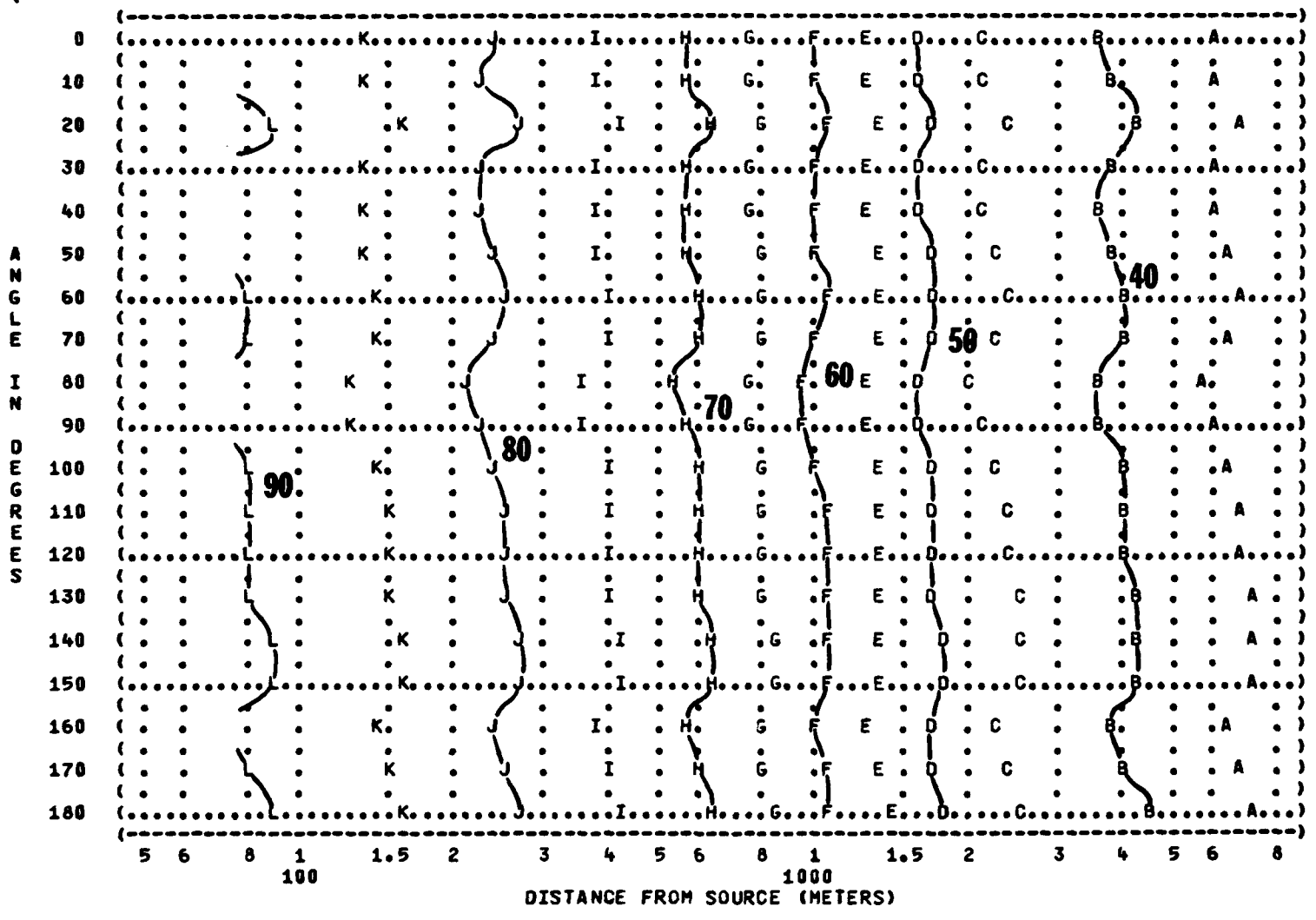
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 19



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85
L	90

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 20

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85

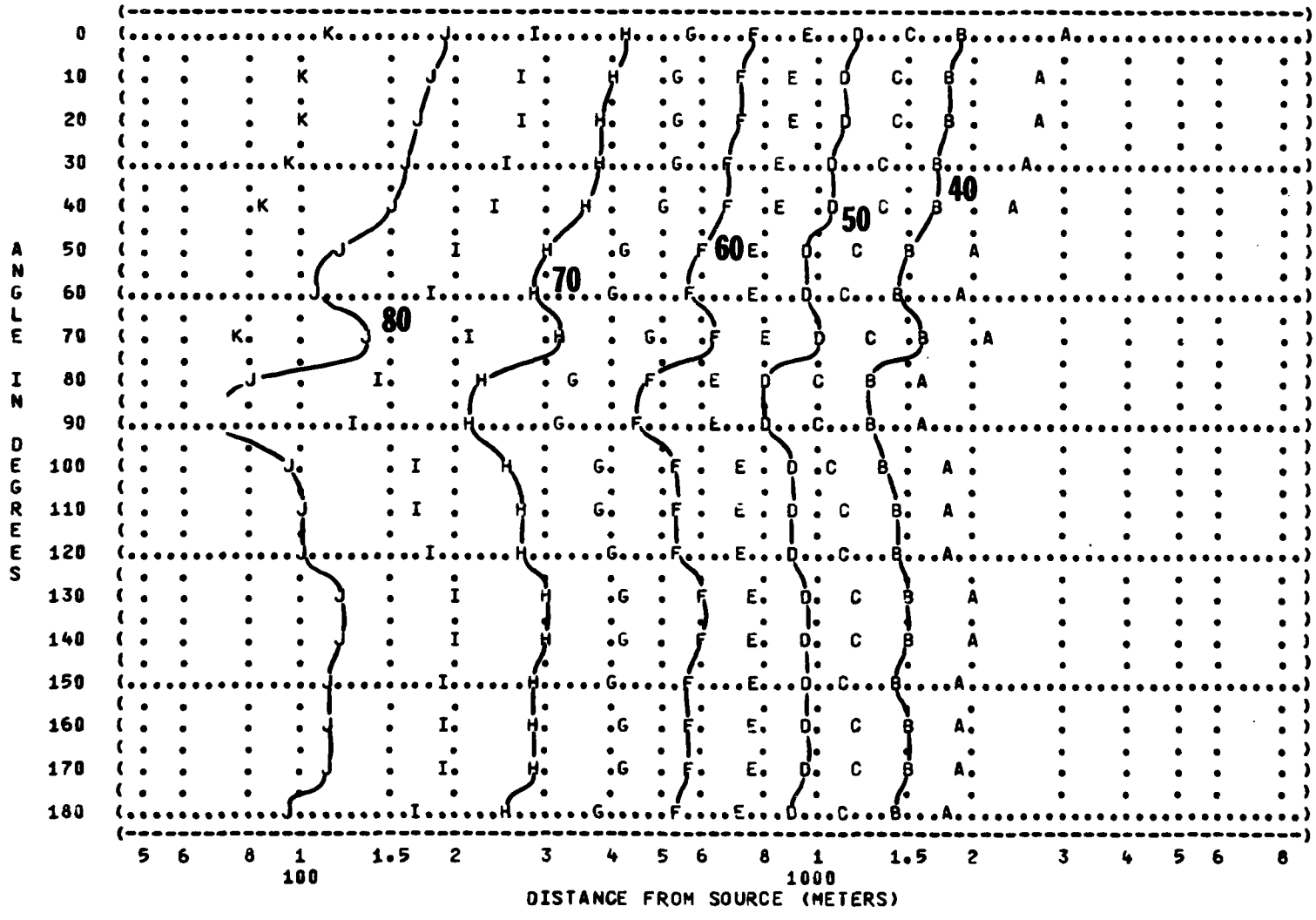


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
250 HZ OCTAVE BAND

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 21

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

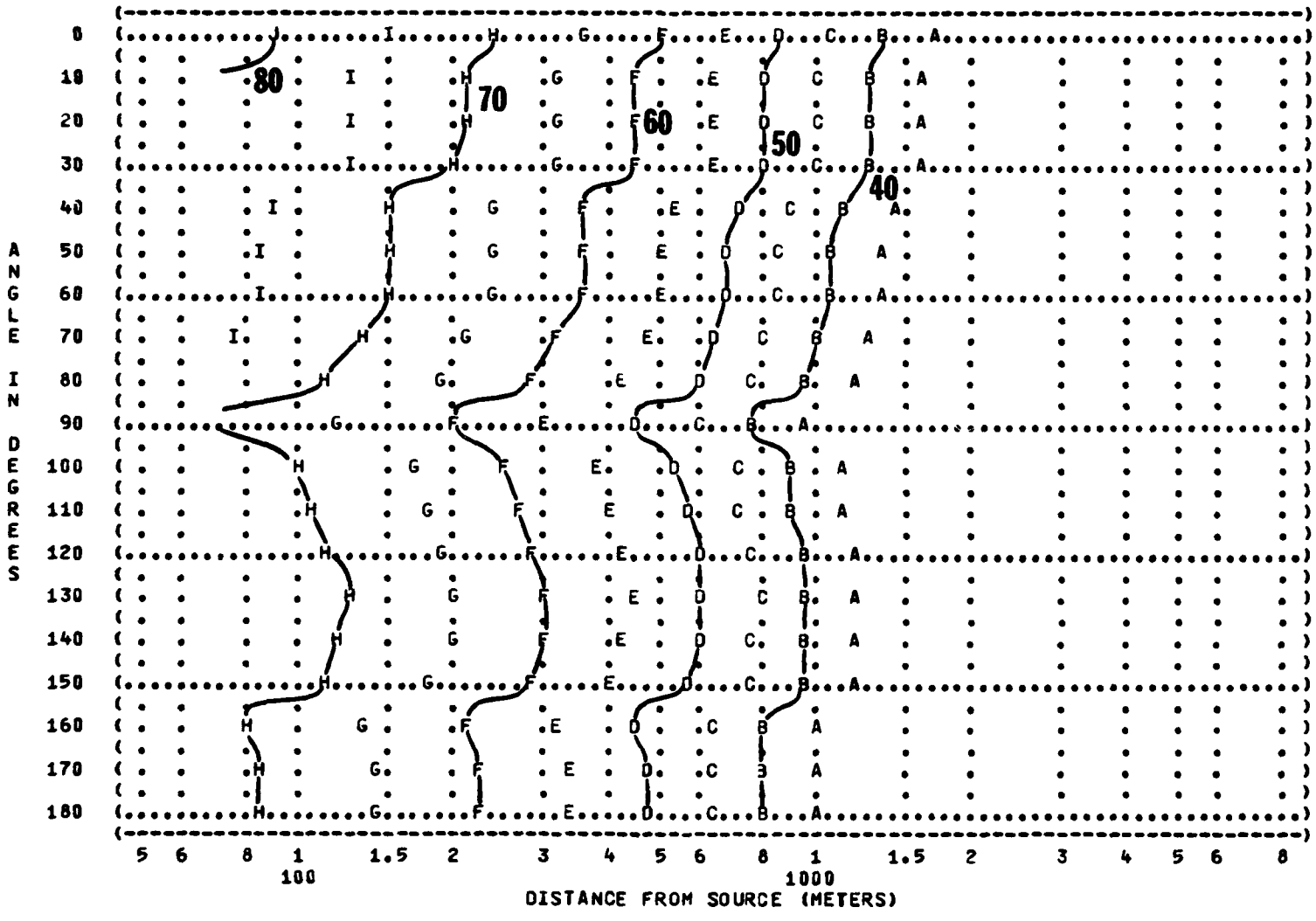


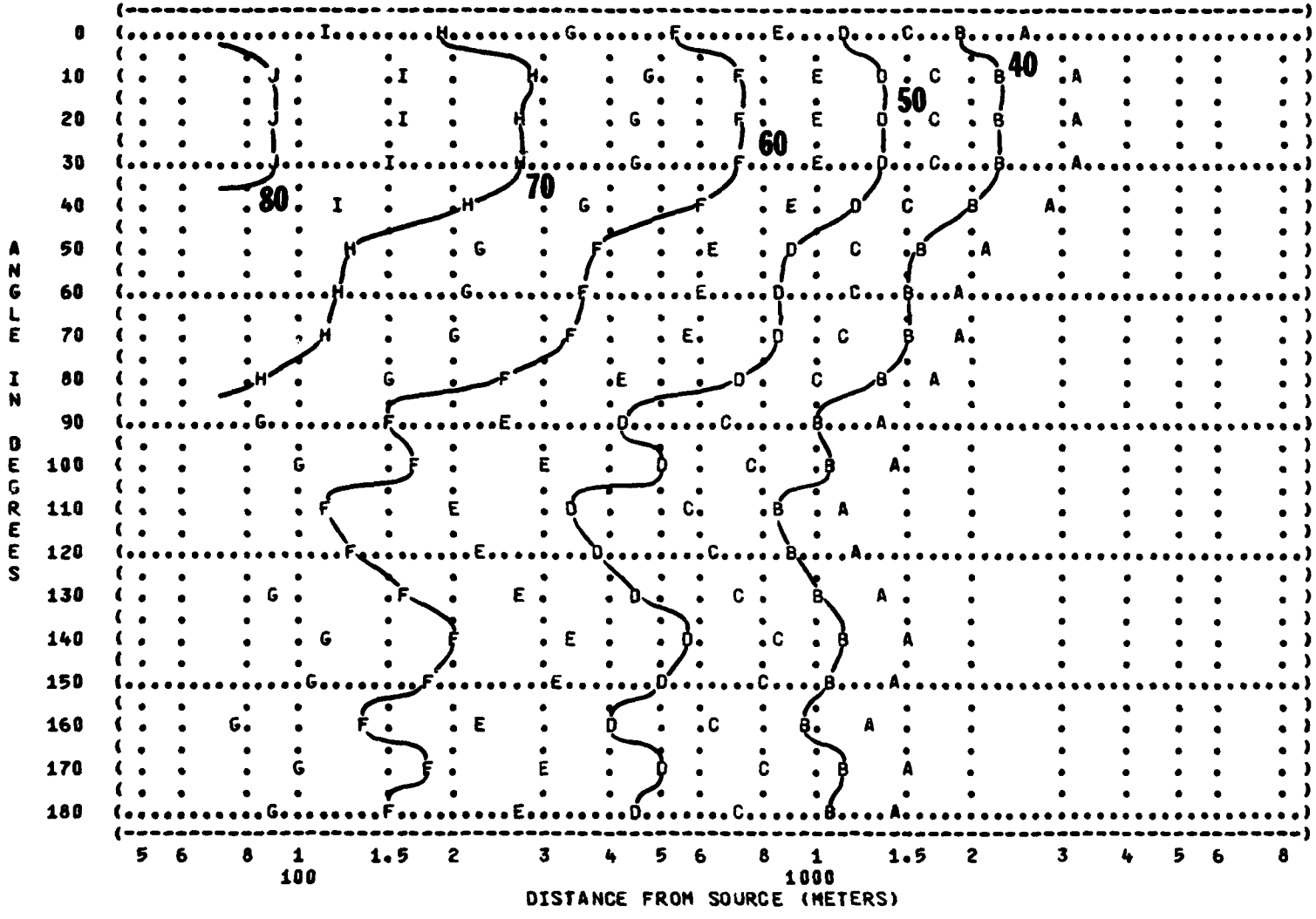
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 22



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: MILITARY POWER 99.5 % RPM; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

IDENTIFICATION: OMEGA 1.4; TEST 77-733-001; RUN 04; 14 SEP 78

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

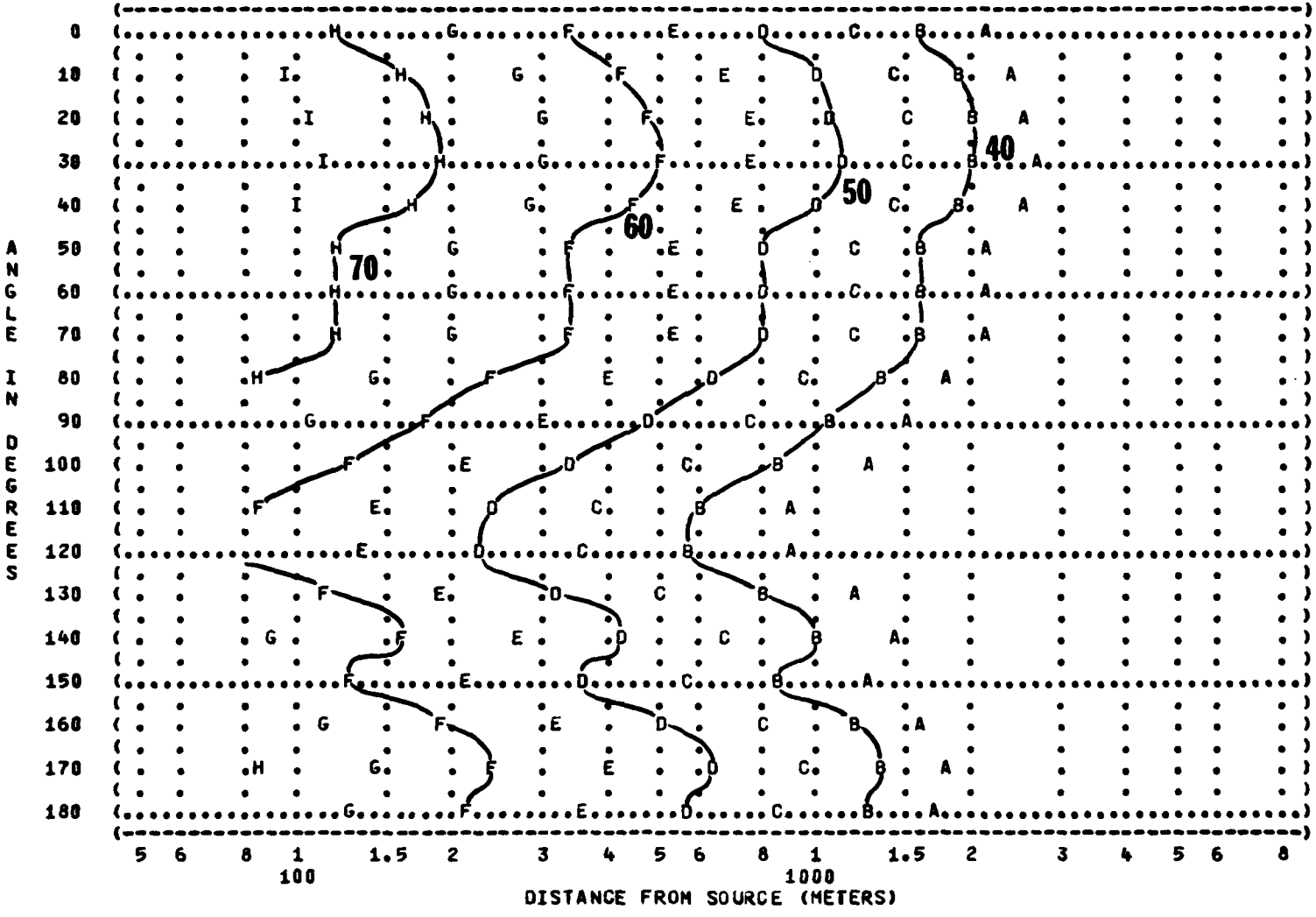


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
2000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04
14 SEP 78
PAGE 24

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

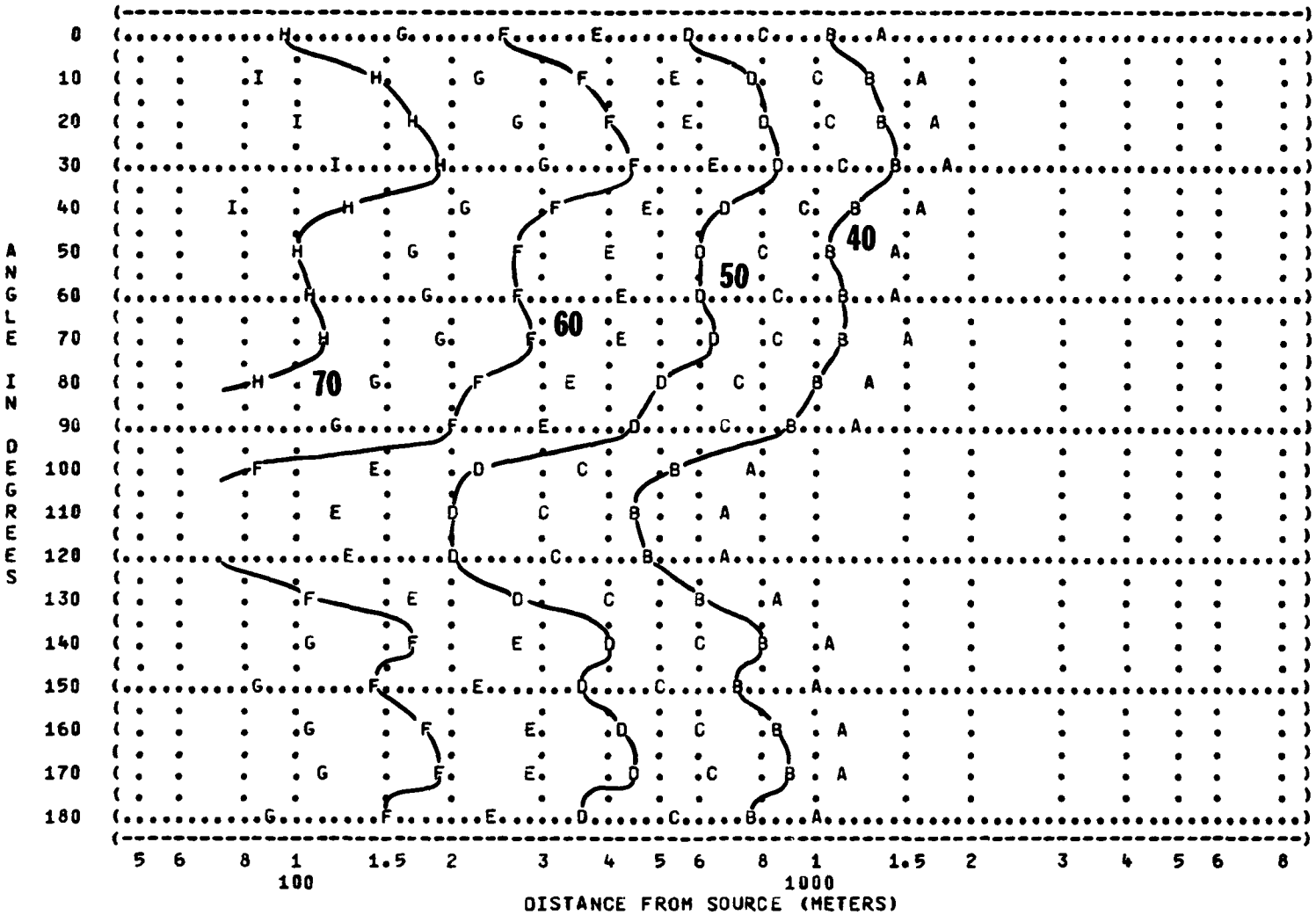


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 04 14 SEP 78 PAGE 25

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-16-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: MILITARY POWER 99.5 % RPM SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

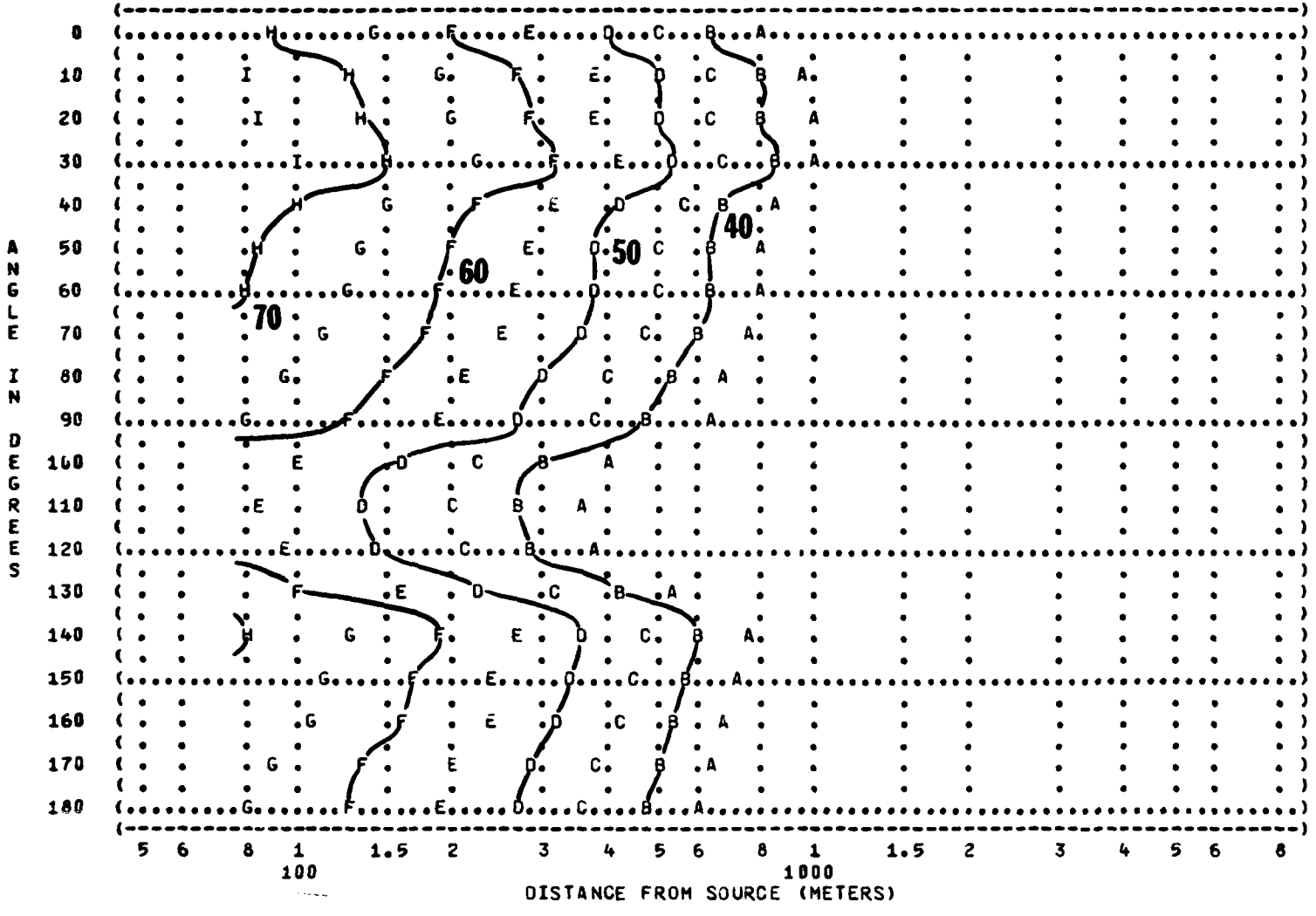


FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
8000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

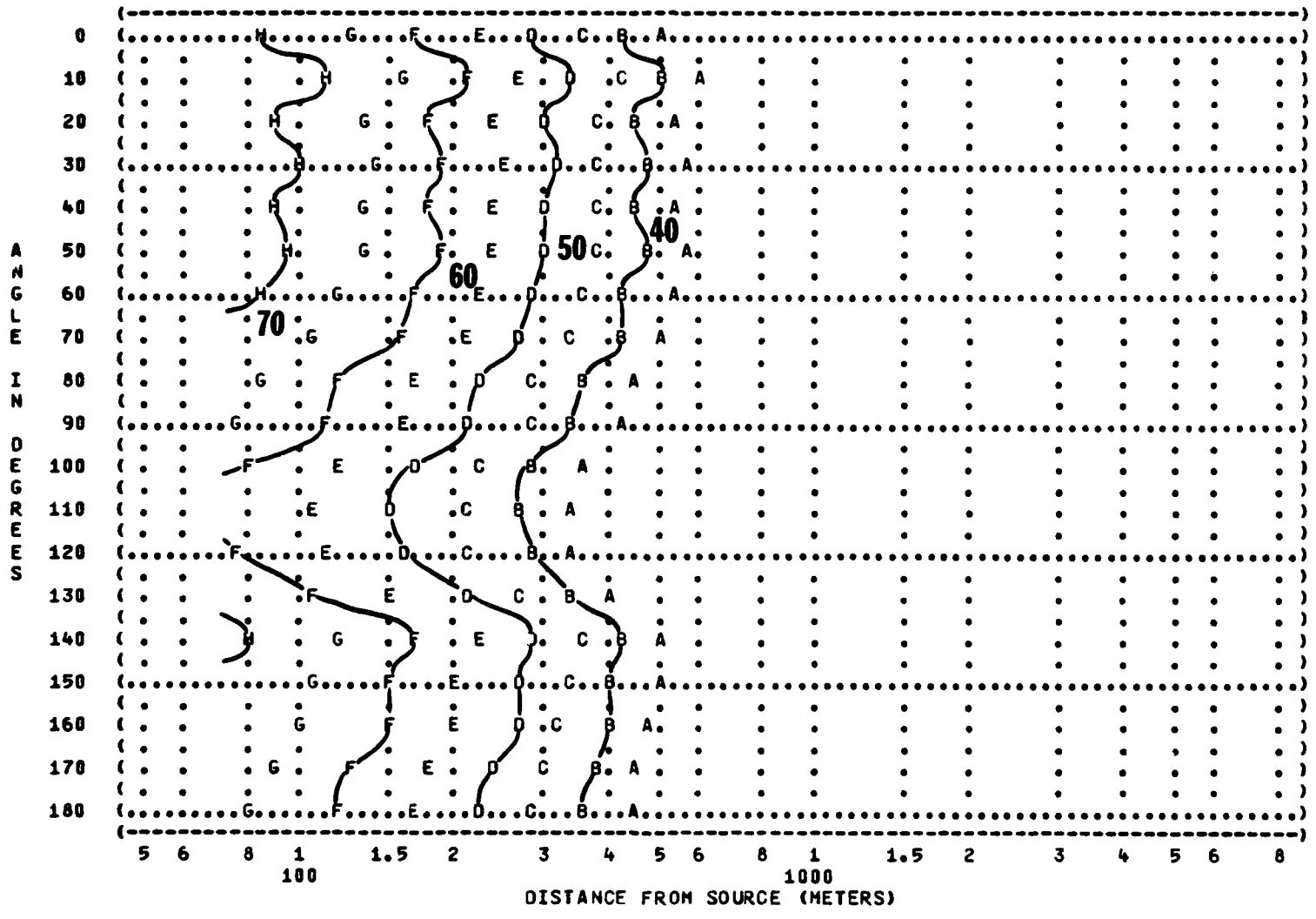
OPERATION:
MILITARY POWER 99.5 % RPM
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 04

14 SEP 78

PAGE 26



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70

AD-A079 868 AEROSPACE MEDICAL RESEARCH LAB WRIGHT-PATTERSON AFB OH F/G 1/3
USAF BIOENVIRONMENTAL NOISE DATA HANDBOOK. VOLUME 128. T-38 AIR--ETC(U)
JUL 79 R A LEE
UNCLASSIFIED AMRL-TR-75-50-VOL-128 NL

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FIGURE: 10

SOUND PRESSURE LEVEL (SPL)
EQUAL LEVEL CONTOURS (DB)
31.5 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05

14 SEP 78

POINT	DB
A	45
B	50
C	55
D	60
E	65
F	70
G	75
H	80
I	85
J	90

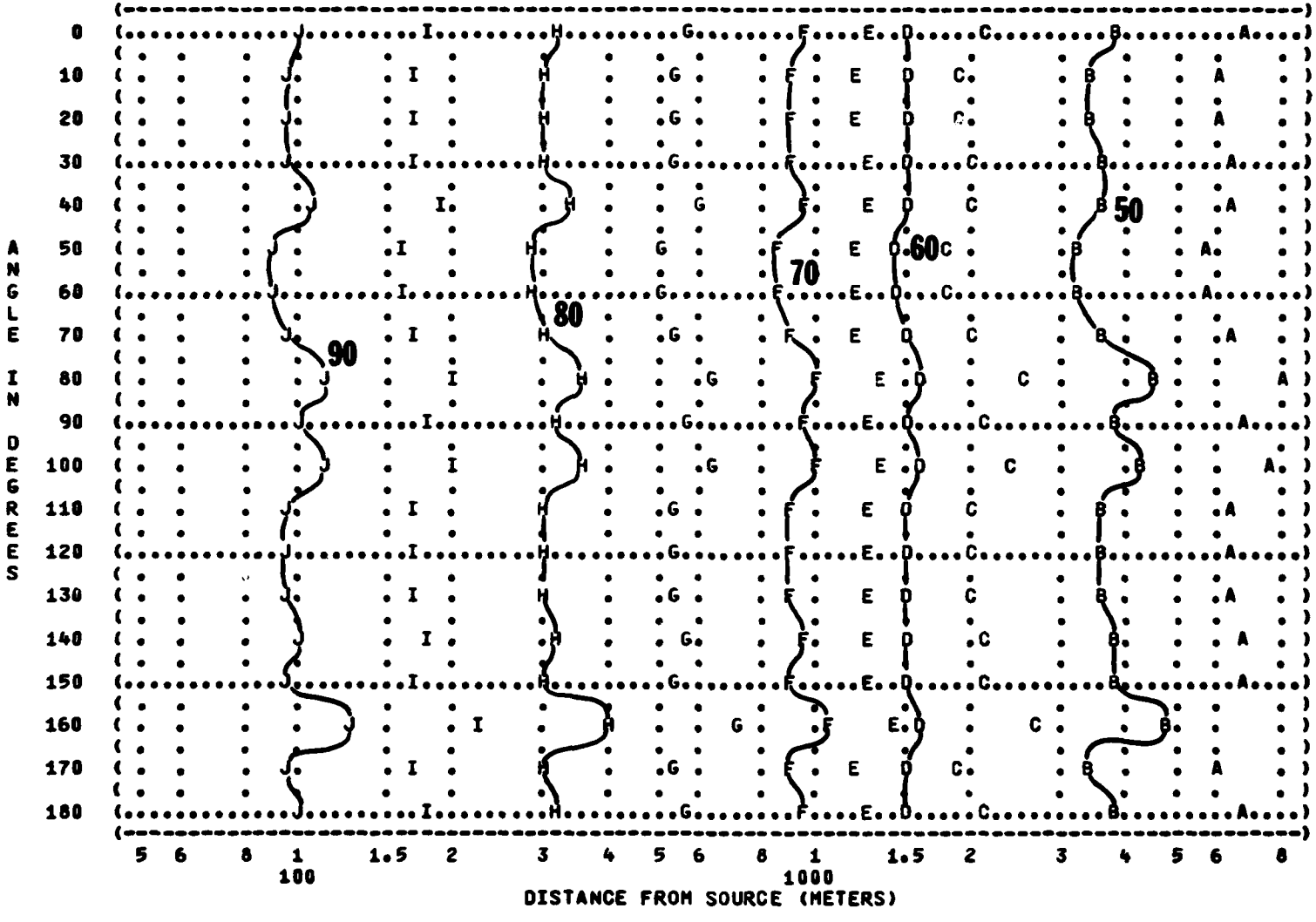


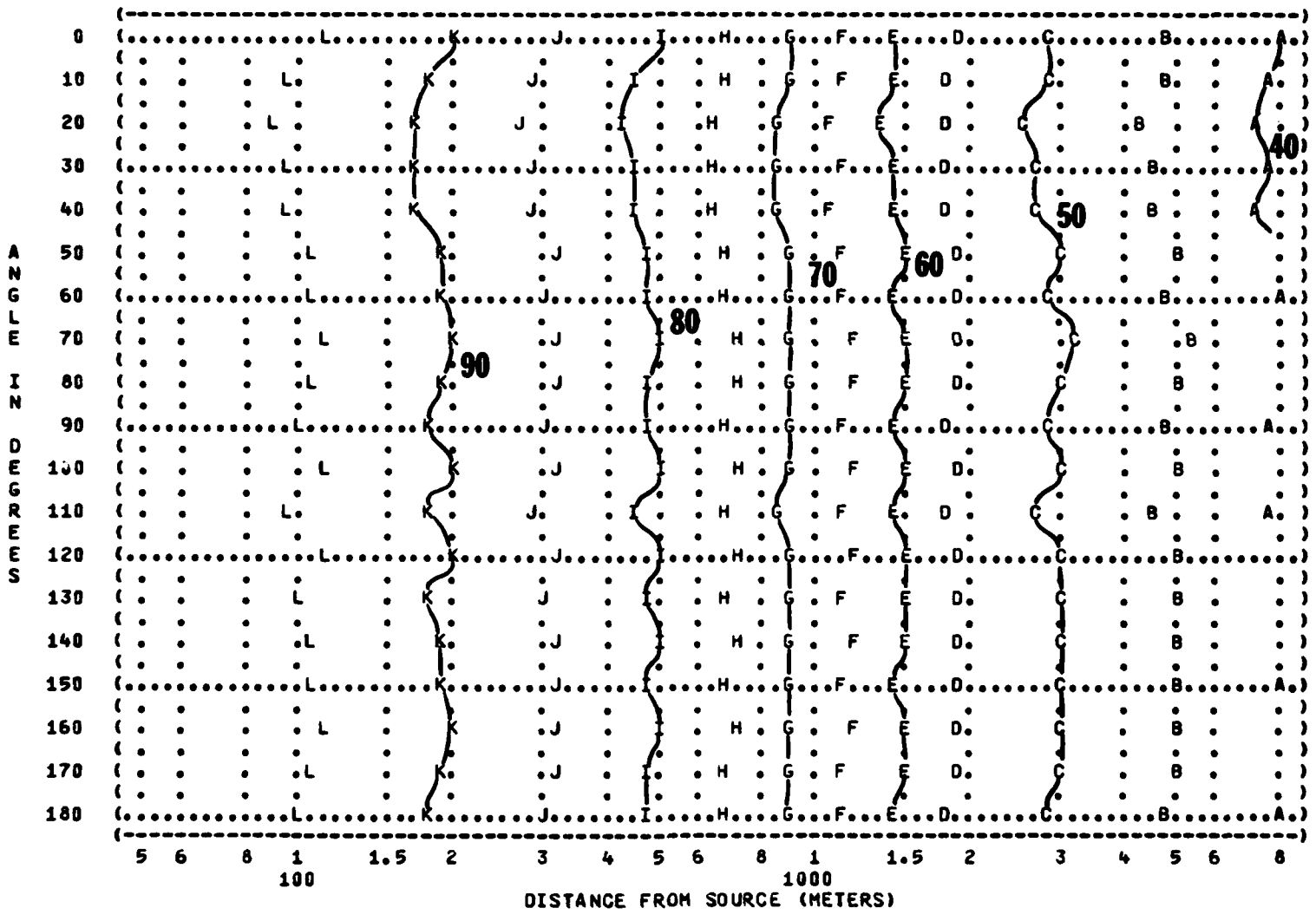
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 63 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05
14 SEP 78
PAGE 19



POINT	DB
A	40
B	45
C	50
D	55
E	60
F	65
G	70
H	75
I	80
J	85
K	90
L	95

FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 125 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 05 14 SEP 78 PAGE 20

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: MAX POWER AFTERBURNER; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

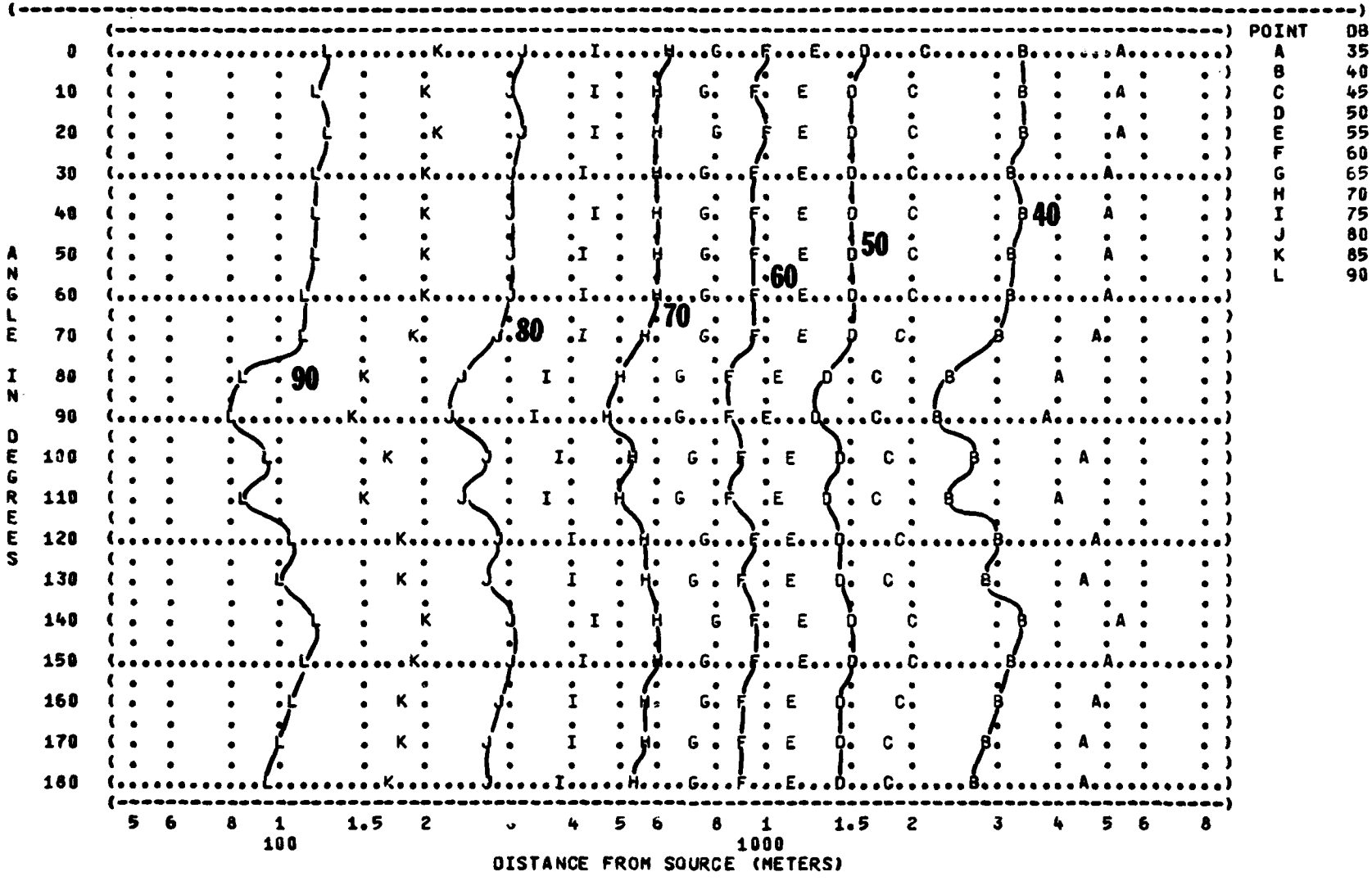


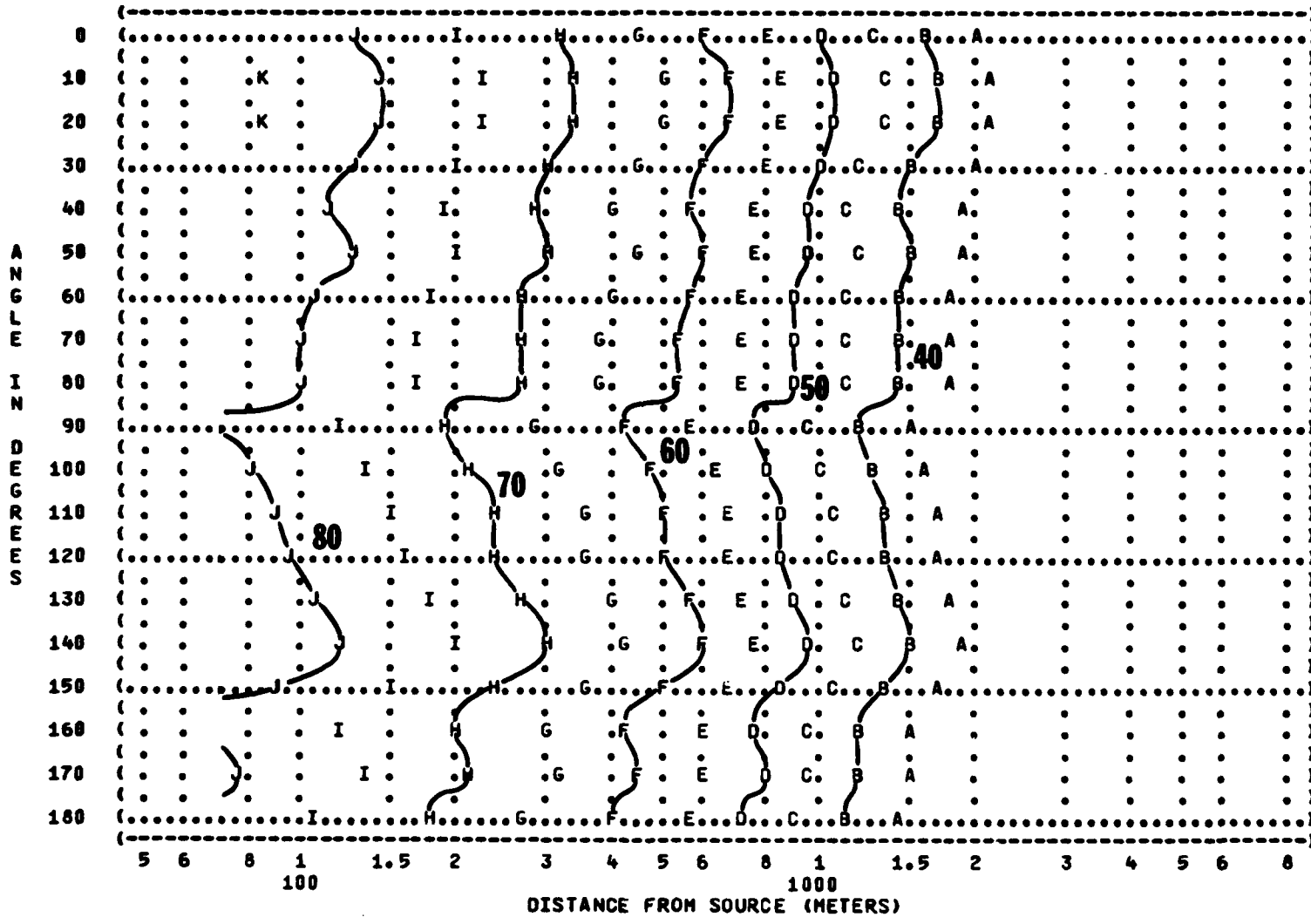
FIGURE: 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 250 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 05 14 SEP 78 PAGE 21

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: MAX POWER AFTERBURNER SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80
K	85

FIGURE 10 SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 500 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 05 14 SEP 78 PAGE 22

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: MAX POWER AFTERBURNER SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C BAR PRESS = .760 M HG REL HUMID = 70 %

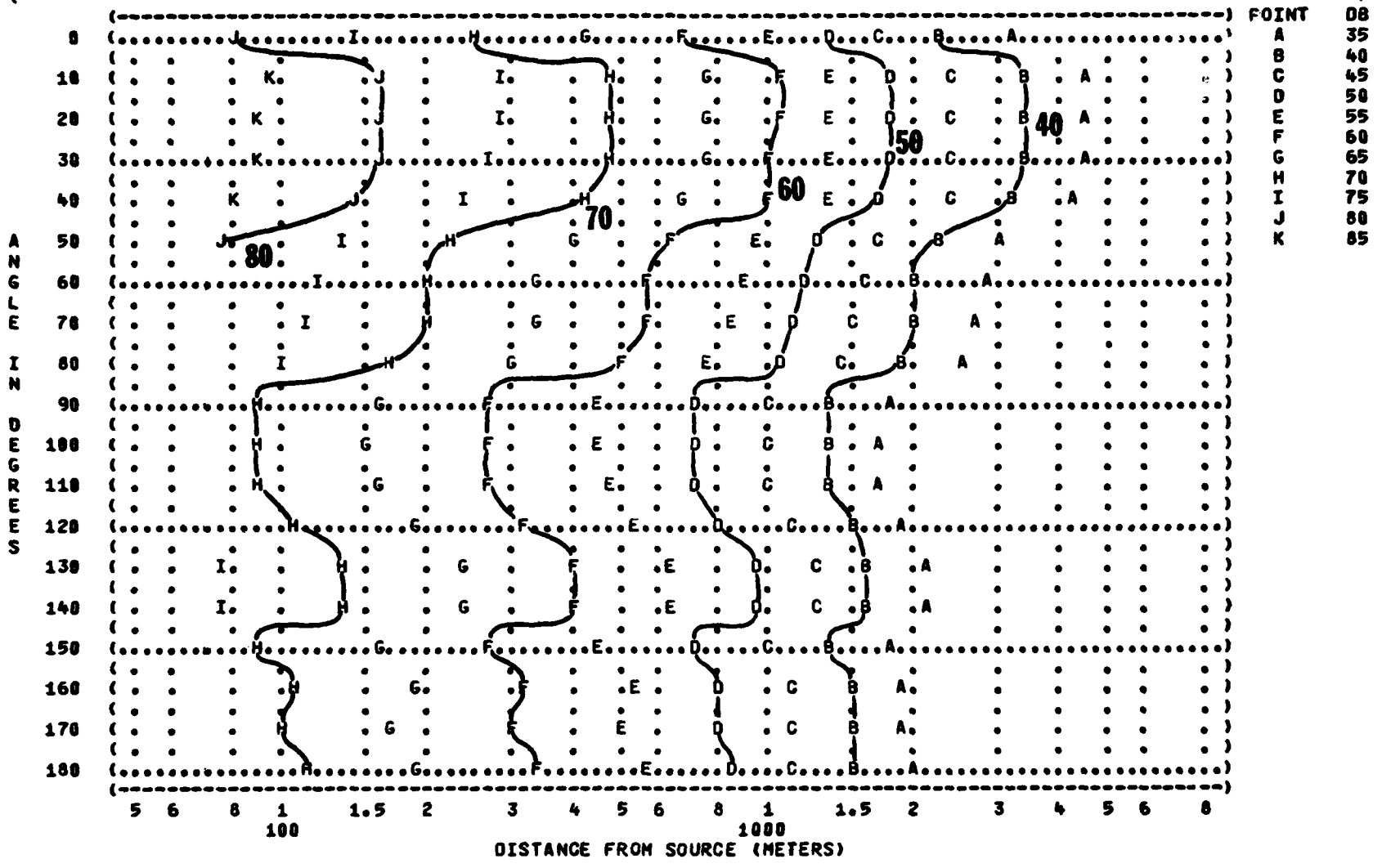


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 1000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-001
RUN 05
14 SEP 78
PAGE 23

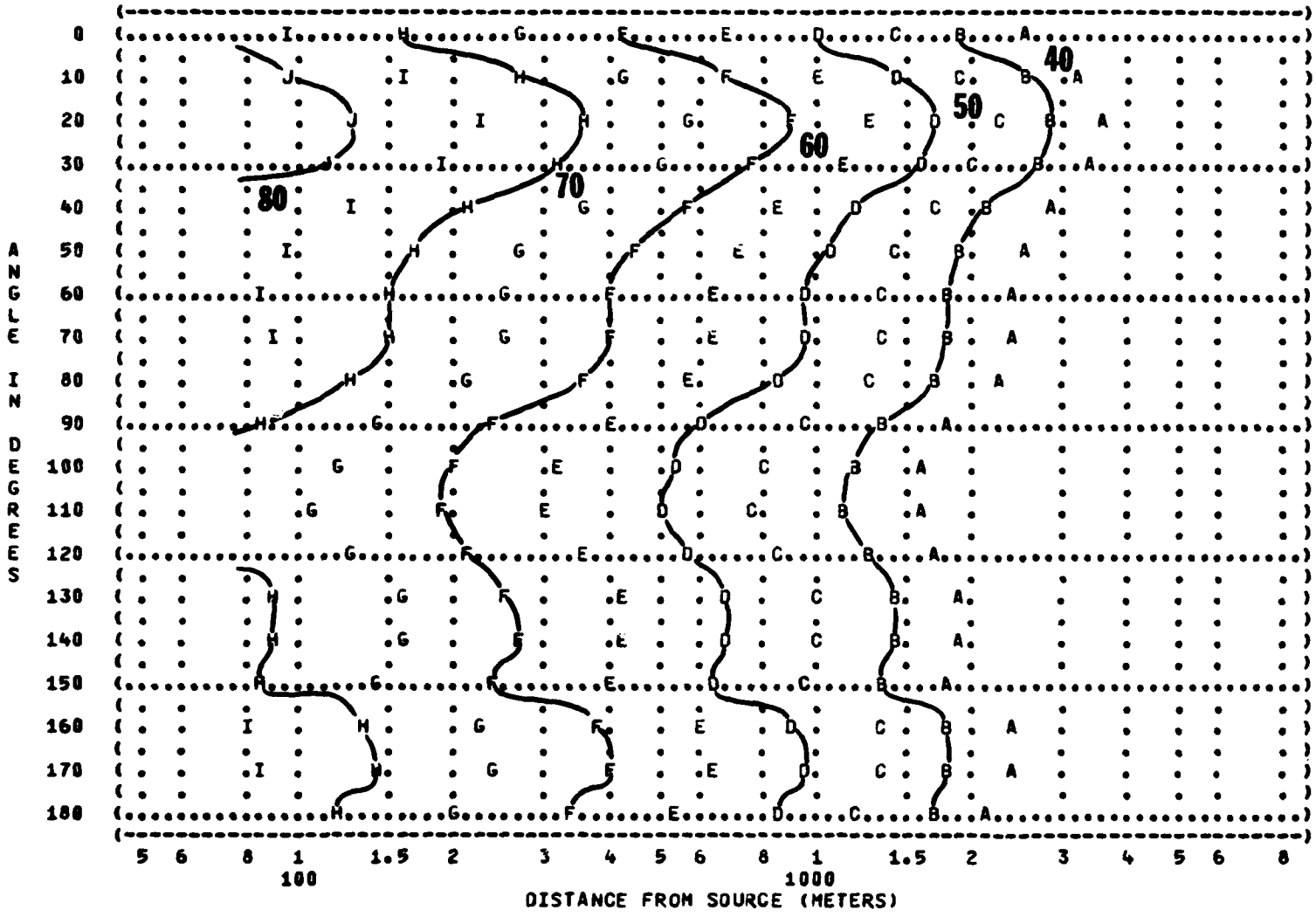


FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 2000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 05 14 SEP 78 PAGE 24

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: MAX POWER AFTERBURNER; SINGLE ENGINE; GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C; BAR PRESS = .760 M HG; REL HUMID = 70 %

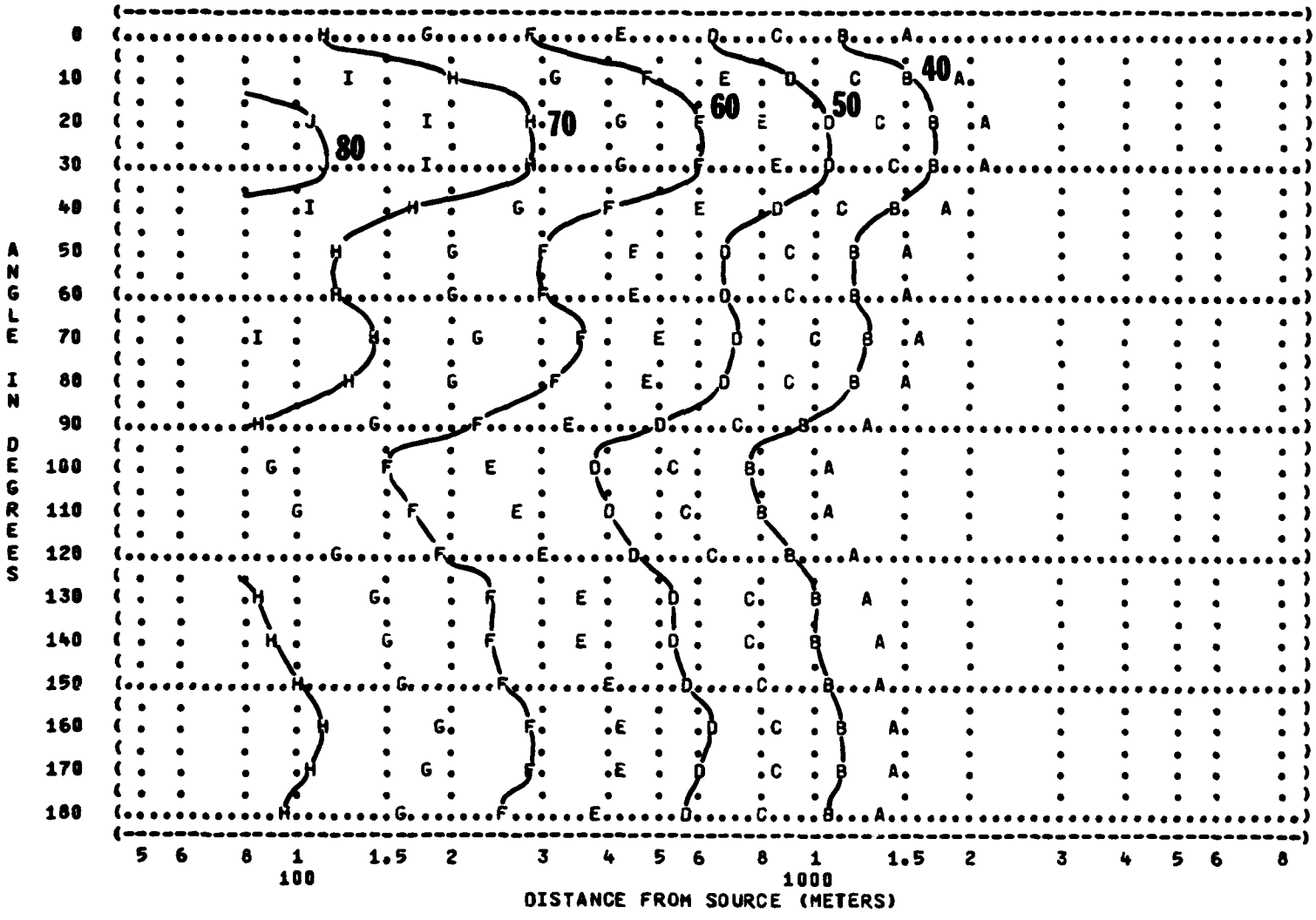


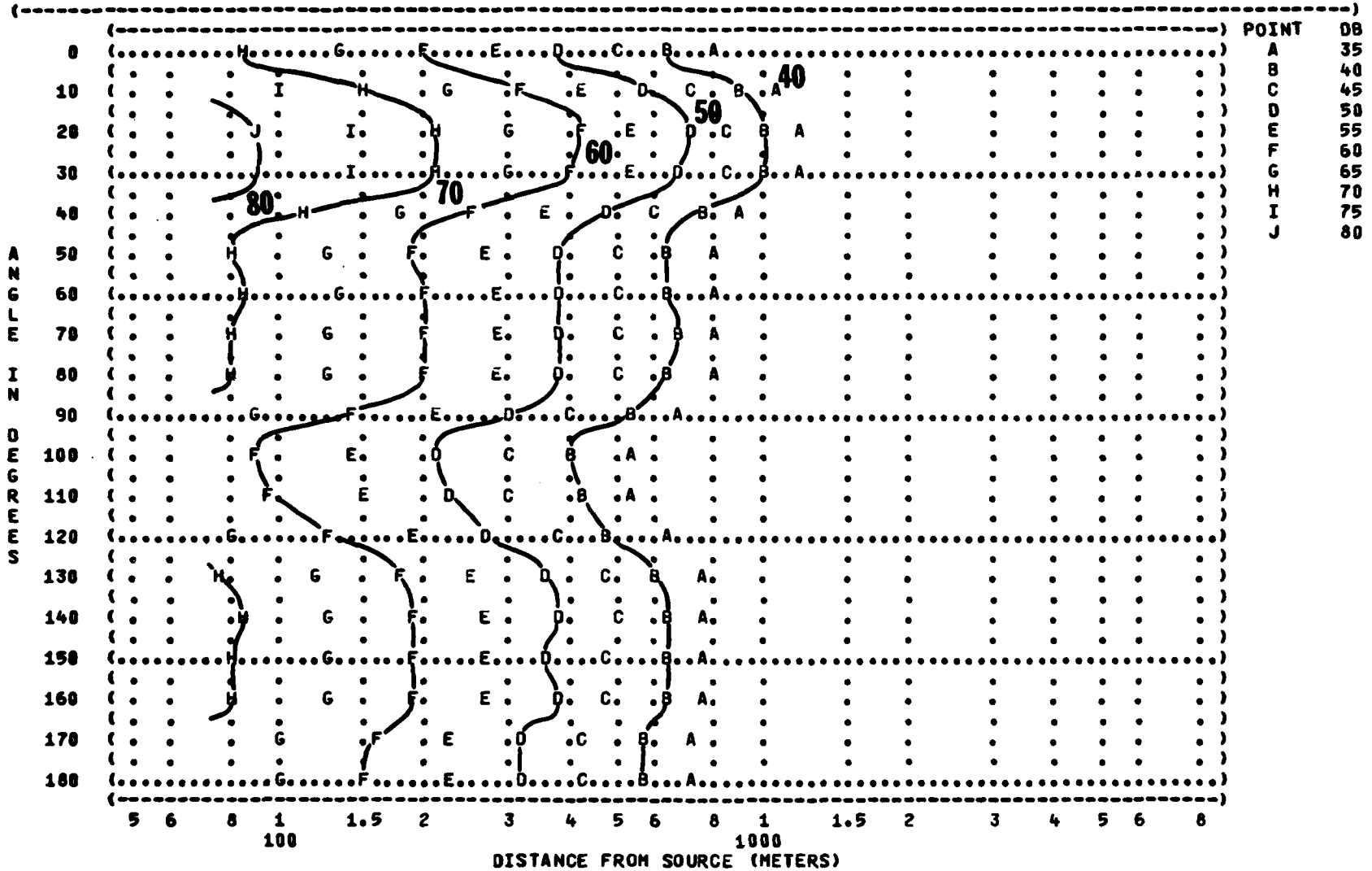
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 4000 HZ OCTAVE BAND

NOISE SOURCE/SUBJECT:
T-38 AIRCRAFT IN THE
AF32A-18-SUPPRESSOR
ENGINE J85-GE-5A
FAR FIELD NOISE

OPERATION:
MAX POWER AFTERBURNER
SINGLE ENGINE
GROUND RUNUP (SUPPRESSED)

METEOROLOGY:
TEMP = 15 C
BAR PRESS = .760 M HG
REL HUMID = 70 %

IDENTIFICATION:
OMEGA 1.4
TEST 77-733-081
RUN 05
14 SEP 78
PAGE 25



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75
J	80

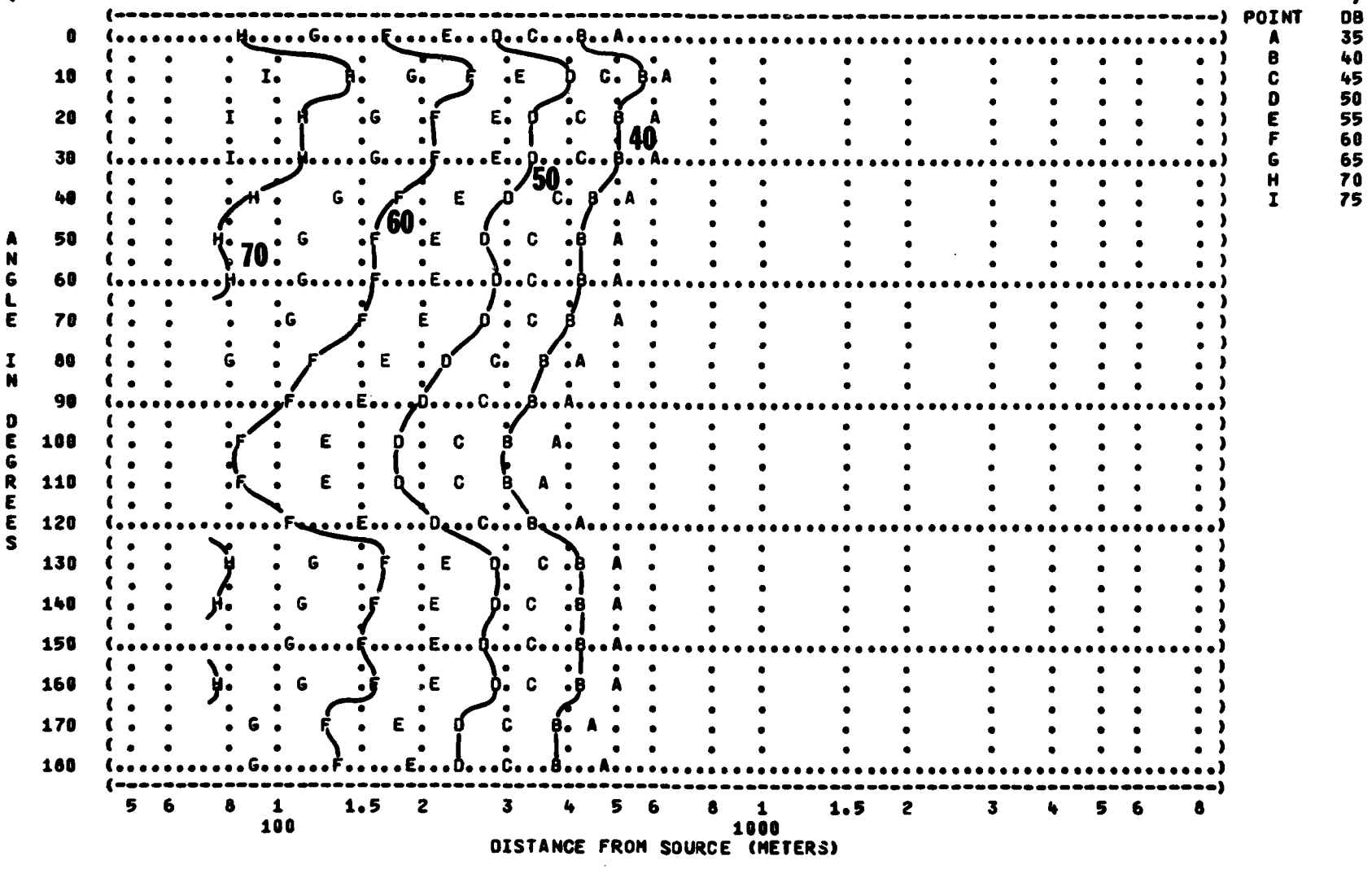
FIGURE 10: SOUND PRESSURE LEVEL (SPL) EQUAL LEVEL CONTOURS (DB) 8000 HZ OCTAVE BAND

IDENTIFICATION: OMEGA 1.4 TEST 77-733-001 RUN 05 14 SEP 78 PAGE 26

NOISE SOURCE/SUBJECT: T-38 AIRCRAFT IN THE AF32A-18-SUPPRESSOR ENGINE J85-GE-5A FAR FIELD NOISE

OPERATION: MAX POWER AFTERBURNER SINGLE ENGINE GROUND RUNUP (SUPPRESSED)

METEOROLOGY: TEMP = 15 C AIR PRESS = .760 M HG REL HUMID = 70 %



POINT	DB
A	35
B	40
C	45
D	50
E	55
F	60
G	65
H	70
I	75

*U.S. Government Printing Office: 1979 — 657-084/381